Editorial Comment

Operation of the new regulations of the Alcohol Control Unit

The new regulations recently issued by the Alcohol Control Unit of the Internal Revenue Bureau have caused a great deal of perturbation in the perfume industry, but after a careful study of these regulations and a clear understanding of the objects and the intentions of the District Supervisors these regulations do not seem as ominous as at first feared.

To implement the filing of the new forms 133 and 134, practically every member of the industry has been visited or will be visited shortly by an inspector of the Internal Revenue Bureau to ascertain whether compliance with new regulation 3 covering records 133 and 134 is adequate according to the views of the Alcohol Control Unit.

With the multiplicity of bookkeeping forms already necessitated by wartime regulations, in a number of instances, something like panic touched a number of members of the industry until it ascertained that the Alcohol Control Unit is desirous of facilitating as much as possible the making of these records and is fully cooperating with the industry in minimizing the amount of trouble which the furnishing of these additional records may cause.

The furnishing of such records as shown in Forms 133 and 134 is mandatory according to the regulations, but the District Supervisors in charge of the Alcohol Control Units in their separate districts have considerable discretion in deciding what records will be the equivalent of Forms 133 and 134, and we understand that in a number of cases after an examination of present records where such records are in a form satisfactory to the Alcohol Control Unit and its inspectors, no further filling out of additional forms will be necessary.

It would seem best, according to Mr. Hugo Mock, Counsel for The Toilet Goods Association, "to seek the advice and cooperation of the District Supervisor in the district. It need scarcely be mentioned that the cause of this new and more stringent supervision of these records is not due to any attempt to make the life of the perfumer more onerous but arises from a recent recurrence of the diversion of denatured alcohol to beverage purposes.

"Therefore, in every case, give the local inspectors the information they wish; if necessary visit the District Supervisor whose cooperation will be gladly tendered."

the American Perfumer and ESSENTIAL OIL REVIEW

COSMETICS · SOAPS · FLAVORS

EST. 1906

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For Preserving Camouflage Cosmetics The Government Specifies

PHENYLMERCURIC BENZOATE

Camouflage face paint helps preserve the lives of our task forces and achieve success of their missions. So the Government has selected Phenylmercuric Benzoate, Medical Grade, in specification EBP No. 234B, as the chemical to be used for the prevention of bacterial and mold growth in camouflage cosmetics. Suggested concentration is 1:25,000.

Hamilton Laboratories, Inc., are leading makers of Phenylmercuric Benzoate, Medical Grade. It is available in 10, 100, 250, 1000 gram packages. Another Hamilton product, Phenylmercuric Borate, now is a standard preservative for blood plasma. Write today for additional information and for prices.

THE HAMILTON LABORATORIES INC.
HAMILTON, OHIO

SUBSIDIARY OF THE CHAMPION PAPER AND FIBRE CO.

Pioneer Producers of Phenylmercuric Chemicals for Medical and Cosmetic Use

desiderata

Comment on interesting new chemical developments and their application to cosmetics and toiletries.

by MAISON G. DENAVARRE

BATH OIL BASES

The scarcity of bath oil bases of the sulfonated type has brought forth a couple of new products that don't foam and will clearly dissolve practically all perfume oils. While their price is higher than that of sulfonated oils, they do not have the odor characteristic of sulfonated oils.

PRESERVING EMULSIONS

Several instances of moulding and fermentation have come to my attention during the past couple of months, and in each case a good preservative was being used, in a sufficient quantity. WHAT'S GOING ON?

It seems that the esters of parahydroxybenzoic acid are poorly water soluble, but quite soluble in fats. This is particularly true of the butyl ester, whose maximum solubility is about 1:5000, yet it takes at least this much and more to be an effective preservative. The same holds true for the solubility of both the methyl and propyl esters, both of which are in wide use, although their solubility is considerably greater than that of the butyl ester. Even so, their solubility in oils is greater than in water. As a result, where there is an oil containing emulsion, and one of these esters is used, especially the propyl or butyl ester, under certain conditions of manufacture and/or storage, the preservative slowly seems to go into the oil phase, fermentation sets in and the emulsion in due course generates enough pressure to force the same out of the jar or bottle. I have seen some of them actually burst.

It is not a fast process, but a very slow one. It doesn't always take place, but you never know when it will. To avoid it, the best thing to do is to use a preservative that is very water soluble and use it in the right amount. For if it does cost you 50 cents a batch more to use, it will pay for a lot of pounds if you save only one batch of a couple hundred pounds. For this purpose, there is available a product which is a mixture of these esters in the form of the sodium salt, freely soluble in water. So long as the pH is on the alkaline side, the product will remain in the aqueous phase for sure and give protection. I have seen a lot of practical experiments and manufactured batches using this material, each time with excellent results, whereas other preservatives failed. Now this doesn't mean that other preservatives won't work. On the contrary, it means that whatever your preservative, it must remain in the water phase to prevent fermentation or moulding. Select a product that will do so. The phenylmercuric salts mentioned elsewhere in this issue are good in spite of the fact that they are poorly soluble in water, but their very high inhibitory action overcomes this in addition to the fact that they do not lose their property if they do go into the oil phase.

AN INSECT REPELLENT COSMETIC

During the approximately ten years that I have been writing this column, enquiries have regularly come in regarding the formulation of an insect repellent that will work on most undesirable insects whether in the United States, Canada, or any other country in the world. During most of that time, work had been going on among a few chemical manufacturers. These people now have perfected several effective repellents, all of which are gobbled up by the Military. But out of it all, one fact seems to be significant; namely, that if a repellent is effective against flies, it is not necessarily effective against the common variety of mosquitos, or chigres, or the Canadian Deer Fly or any other flying or jumping pest.

Another thing is happening, too. Our methods of testing repellents is being perfected to the point where there need not be a 100 per cent plus or minus variation. Nor is the Office of the Surgeon General in Washington sticking to preconceived notions about how to protect or treat the human against insects, whether they fly in the air or burorw into the skin, as is evinced by the changed specifications for body louse powder.

You may wonder how all this will affect cosmetics or ties in with the art of making the body appear more beautiful. Just this. After this war, people will not be satisfied to sit out in parks or their back yards and get the inevitable mess of mosquito bites for example. They will be able to select a mosquito repellent that is pleasant to the smell, non-greasy, effective for a couple of hours or more, and *maybe* get it from the manufacturer of toilet articles.

Built to Take Punishment

NO ONE *coddles* a collapsible tube! Hard-handed users squeeze and fold and squeeze again until it gives up the last portion of its contents, *or* until less sturdy tubes break down under the strain. No tolerance is given the product so unfortuate as to be packed in a defective or inferior tube.

War's grim demand upon vital metals makes it more than ever necessary to choose collapsible tubes wisely. SHEFF-ALLOY Tubes, of the less critical metals . . melted, tempered and toughened according to our exclusive "Sheffield Process" . . are *built to take punishment!* . . to give more protection than the product ever needs! And coupled with our big series of over 50 "VINICOTE" Inner Coatings, practically any product of proper consistency can now be packaged in these convenient, well-liked, tough containers.

NEW ENGLAND COLLAPSIBLE TUBE COMPANY

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THE WILCO COMPANY, 6800 McKINLEY AVENUE, LOS ANGELES, CAL.

Many toilet article manufacturers are bottling or otherwise packaging items for the Military that contain insect repellents. Who will know more about it than they?

In speaking with a number of people in Canada recently, all evinced a keen interest in repellents. Something that would work. Something that they might make. But what? Don't ever think those boys up there do nothing but play hockey. They make plenty of things, raise tough fighters and are alert to all new things.

The properties desired in a good repellent are the same required of a good cosmetic, excepting for the repellent properties. It is our dish. Let's get it!

LANOLIN SUBSTITUTES

According to all indications, lanolin is going to be tight until the Fall, maybe longer, especially if the war continues to go at its present pace. Undoubtedly, there is more crude lanolin now being extracted than ever before, but military demands get first call as always, and their demand has been pretty steep lately. It may be even greater.

As a blender, lanolin has practically no equal. It is now melting, noncrystalline and possesses some coupling action. As an emulsifier, there are still some products available that can replace it, especially if they are originally made from crude lanolin or if they are not related to lanolin at all. Some absorption bases continue still to be available. Other more concentrated emulsifiers can be had from time to time.

GLYCERIN REPLACEMENT

Another glycerin replacement available in very limited quantity, consists of a propylene glycol mixture with sugars. It is straw colored and has but a faint but characteristic odor.

BASE FOR LIQUID STOCKINGS

For stockings of the quick or slow drying type, one supplier offers a series of bases for the formulation of such products. To show how the materials are used, the company offers a formula with specific suggestions for changing the drying time or the color.

EMULSIFIER REPLACEMENTS

With the changing picture in raw materials, all emulsifiers come up for reconsideration in the light of possible replacements. No matter what your emulsifier may be, better check into all the possibilities that require little or no fats to fabricate. The best that can be said for fats is that their outlook is very cloudy.

Questions and Answers

457 FINGER WAVE LOTION

Q.: I am interested in making a finger wave lotion that is clear and will dry in 18 or 20 minutes. It should not flake up and leave the hair dry and brittle. I have tried many formulas including the enclosed formula that was picked from one of the Trade Journals.

A. C.—NEW YORK.

A.: There is not much choice as to what you can use for any kind of product these days. While it is true that a ½ per cent gelatine with one per cent plasticizer in water will make an excellent hair dressing, at the same time one must realize that there are two types of gelatine, one product from an acid and the other from an alkaline precursor; in addition, such solutions have a tendency to gel unless buffered. Such a buffer is described in *U. S. Patent* 2,056,135. Since this patent is still valid, other buffers will have to be found. The use of alcohol in such a waving fluid will tend to precipitate the gelatine. A water soluble preservative other than alcohol should be used. If this preservative is most effective in an alkaline media, it may not be satisfactory for gelatine, stable in the acid range, and vice versa for acid preservatives.

458 SOFSKIN HAND CREAM

Q.: We would like to have you give us the formula for Sofskin Hand Cream. Also, please send replacements Bulletin.

F. T.—PENNSYLVANIA.

A.: Who wouldn't like that formula? Even if you had it, you would still have to work out a method of manufacture. Sometimes this is more important than the formula. We suggest the following formula for a hand cream taken from "The Chemistry and Manufacture of Cosmetics," by deNavarre, but we do not know if it is the same as the product you are interested in:

	Parts
1. Stearic Acid XXX	18
2. Potassium Hydroxide	1
3. Cetyl Alcohol	0.5
4. Diethyleneglycol monoethylether	5
5. Water	75.5
6. Perfume q.s.	
	100.0

Directions: A. Place 1 and 3 in a kettle and bring to 85 deg. C. (B) Dissolve 2 and 4 in 5 and bring to 85 deg. C. Slowly add (B) to (A) with moderate stirring, and when emulsion is complete, remove from mixer and turn over by hand. Perfume at 50 deg. C. or let set overnight; perfume following morning and mix again, then pack cold. You may find it desirable to include some zinc oxide or titanium dioxide for their whitening effect. You might also increase the amount of plasticizer for increased emollient effect.

459 FLAVORING TOOTH POWDER

Q.: We are using methyl salicylate, menthol and saccharin in flavoring our tooth powder, to the extent of 2 per cent. In due course, the powder has a tendency to go flat and it no longer leaves the mouth refreshed. We would appreciate your suggestions to improve that permanence of this flavor, keeping in mind that we want it on the peppermint side.

J. S.—NEW JERSEY.

A.: Aren't you a little confused regarding the character of your flavor? With methyl salicylate, it would definitely be on the wintergreen side although the menthol would give a cool and refreshing effect. The problem is a common one and there is no definite solution to it. We would suggest that you use a safe fixative to hold the flavor. Sometimes using a wetting agent in place of soap increases the shelf life of a dentifrice flavor, but since wetting agents are almost impossible to get, this line of experimentation is futile at the moment. As fixatives, try some of the natural aromatic resins, such as benzoin.

460 LATHER IN SHAMPOO

Q.: We are making an alcohol-containing shampoo with 20 per cent anhydrous soap in 33 per cent of alcohol. This mixture does not lather enough, so would you be kind enough to advise us what could be added to boost the lather.

R. R.—MISSOURI.

A.: Assuming that you are using a low titer soap similar to coconut oil soap, your product will manifest its lather after most of the alcohol has evaporated because alcohol cuts lathering to a considerable extent and is one of the things that is used to break the foam due to soap in several commercial operations. Unless you want the alcohol for a special task, there is no point in including it in your formula in such amounts. A very effective shampoo can be made without the use of alcohol. If alcohol is used to keep your shampoo clear, try some other substitutes such as tetra sodium or potassium pyrophosphate to the extent of ½ per cent as a starter. Both compounds will boost the alkalinity somewhat.

Fresh and exhilarating as the flower itself—WARDIA—an entirely synthetic Rose character, is meeting the most exacting demands of discriminating perfumers. Used by itself or as a replacement for the natural Rose oil it is invaluable. A Chuit, Naef product, ample stocks are available in this country—$58.00 per pound—a trial ounce $3.75.

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Phenylmercuric Salts Make Cosmetics Self Sterilizing

Phenylmercuric salts added to cosmetics in very minute quantities effect sterilizing properties . . . The soluble salts, the borate in particular, are not harmful and also fall within lawful amount

by MAISON G. DENAVARRE

IN 1931, Weed & Ecker published a report describing the unusual bactericidal and fungicidal properties of two new compounds, phenylmercuric chloride and nitrate, which they had discovered during a routine search for a new medical germicide. While anyone today might expect that a mercurial, organic or inorganic, would manifest some kind of germicidal action, it was nevertheless unexpected to find that these compounds were far more effective than anything that Weed & Ecker had tested, including a variety of mercurials. This effect on bacteria and fungi was new, although the phenylmercuric salts themselves had been known since 1870. Thereby, the world gained the use of a series of new compounds as germicides and fungicides. Today, the materials are available in commercial quantities and are in daily use in various industries. From among the host of germicides or bacteriostats that might have been used, phenylmercuric borate and nitrate are the standard chemicals used to preserve dried human blood plasma; it goes directly into the human's veins.

USE IN COSMETICS

Our work with the phenylmercuric compounds began about 1934 and was applied to commercial practice in the cosmetic industry about 1936. During the time they were used, cosmetics containing these compounds were sold by the hundreds of thousands of units. It is significant that not one case of irritation or dermatitis was reported, although it is not necessarily true that none occurred. (In fact, more cases of sensitivity were reported from the use of lanolin in a particular cream.) The means of distribution were such that if irritations or dermatitis had occurred, it would have been ouly a matter of days before it would have been known. Undoubtedly, the low concentration of the phenylmercuric compounds used together with their safety, accounted for this absence of reported sensitizations.

Our reason for incorporating the phenylmercuric compounds in cosmetics was threefold; namely,

1. To overcome the gross contamination of materials that come from all corners of the world and which are handled by the sick and well alike;
2. To overcome air-borne contamination that can occur in the manufacturing plant;
3. To prevent the cream from being a culture medium for disease producing germs transferred from the users hands to the cosmetic in course of daily use.

In other words, the motive was purely hygienic. The idea was to keep the product germ-free throughout its life, from the day it was packed until the last speck had been used, for ordinary cosmetics are usually neutral or slightly alkaline, moist, and are kept in a relatively dark place at room temperature, which may run from 70 deg. F. to as much as 100 deg. F. in warm weather. This is ideal for bacterial and fungus growth.

Yet when as little as 1:35,000 of phenylmercuric benzoate was included in a cream for example, it was found that the cream became free of viable germ life in about 20 to 30 minutes after contamination with considerable numbers of *Staphylococcus aureus*, the pus producing bacteria. This was indeed an advance in the hygiene of the skin, for the pus germ mentioned will live in oils (except cod liver oil) for over six weeks after innoculation. Now can you see the reason for making a self-sterilizing cosmetic? It is just as sound as washing with soap.

PHENYLMERCURIC SALTS

Like all chemical compounds, phenylmercuric salts possess inherent incompatibilities. They are most stable on the acid side of the pH scale. They are converted to phenylmercuric hydroxide when the pH exceeds 9.0 or so. They are slightly soluble in animal and vegetable fats and oils and in some other solvents. When dissolved in fats or oil, these solvents tend to prevent hydrolysis in the alkaline range but do not interfere with the bactericidal or fungicidal properties.

Phenylmercuric salts do not interfere with the color, stability, consistency, or usefulness of cosmetics because they are white materials, odorless and easy to incorporate. Their effective inhibitory concentration will vary with the product and the degree of inhibition desired. We have used 1:25,000 to 1:35,000 with satisfactory results.

A number of the phenylmercuric salts have been accepted by the American Medical Association Council on Pharmacy and Chemistry. Complete descriptions of the compounds will be found in the *J. Am. Med. Assn.* 117, *1784, 1941* and in current issues of *New & Non-Official Remedies*. The nitrate, picrate and borate are described. The benzoate has the following constants:

Phenylmercuric Benzoate*

Melting point: 87-100 deg. C.

Test for inorganic mercury salts: When a five per cent caustic soda solution is added to phenylmercuric benzoate, there is no gray or yellow color produced (absence of mercurous or mercuric salts).

Solubility: One gram phenylmercuric benzoate dissloves in 30 c.c. of cold anhydrous methanol and shows not more than a faint opalescence.

Purity: When titrated with 0.1 normal potassium thiocyanate solution, it assays not less than 99 per cent phenylmercuric benzoate.

The active portion of all phenylmercuric salts is the phenylmercuric radical (C_6H_5Hg)+. Aqueous solutions, if buffered, are quite stable; organic solvents reduce the stability a bit, but it is still relatively good. The solutions do not react with body proteins and are non-corrosive to the common metals except aluminum, unless these properties are influenced by the acid radical (nitrate, chloride, benzoate, etc.).

They do not interfere with the precipitating reaction of human serum, the action of complement, the digestive power of pepsin or trypsin, or the antigenic power of vaccine; serum proteins are not precipitated and the blood is not hemolyzed. The minimum lethal dose for rabbits is from eight to ten milligrams per kilogram of animal, when the nitrate is used intravenously. By mouth the *mld* is about three times as much.

The acetate, borate and benzoate are most useful in cosmetics. They are also the least irritating of any one of the series.

GERMICIDAL POWER

The following organisms were killed by phenylmercuric nitrate in five minutes, when tested by Weed & Ecker, using the Reddish technic and a concentration of 1:50,000 to as high as 1:350,000:

Strep. Hemolyticus
B. subtilis
B. typhosus
B. pyocyaneus
Staph. aureus
B. mucosus capsulatus
B. proteus
B. aerogenes
B. coli

In ten minutes, the following sporulating anaerobes were killed with phenylmercuric nitrate 1:25,000 or higher:

Vibrion septique
B. tetani
B. welchii
B. histolyticus
B. sporogenes

It took a concentration of 1:12,500 of phenylmercuric nitrate to kill *B. chauvei*.

The scientific literature is rich with articles dealing with the phenol coefficients, comparison between phenylmercuric salts and other organic mercurials as well as the inhibitory properties of these salts using a wide variety of organisms. Thus the inhibiting action of the borate against *B. tetani* as determined by Armangue & Weniger was 1:3,000,000. Cohn using the nitrate reported the inhibitory effect of 1:12,000,000 against small numbers of virulent human tubercle bacilli.

One of the most valuable properties of phenylmercuric salts is their effectiveness against pathogenic fungi such as those that cause athlete's foot among others. For further data on this subject, consult some of the references at the end of this article.

HOW TO USE IN COSMETICS

Practically all of the phenylmercuric salts are soluble in the required concentration in animal or vegetable fats or oils. Usually, a concentrate of 1:10 or 1:100 is made up in advance and this is used in the finished product, adding the oil or fat concentrate to the other fats and fabricating in the usual way. It takes some heat to dissolve the salt in the oil or fat, which must be continuously agitated until dissolved, or the salt may become decomposed and not dissolve.

In any cosmetic where there is a small amount of oil or fat, the stock solution in vegetable oil should be used. This includes all hand lotions, powder bases, vanishing, cold and emolient creams. The benzoate is best used in those preparations.

In the case of clear oils such as body oils, baby oils, skin oils and the like, the benzoate in the form of a stock solution is best to use.

Use the borate or acetate, buffered, in clear aqueous solutions. A stock solution using acetone, alcohol and water will dissolve about 1:500 of the borate, including the buffer. However, it must be remembered that straight solutions with organic solvents have diminished shelf life by comparison.

The phenylmercuric compounds may be used in all creams or cake makeup; their usefulness in face powder has not yet been demonstrated. The compounds do not interfere with the colors of lipstick or other highly colored cosmetics, nor do they alter the taste or odor.

USED AS A PRESERVATIVE

Products susceptible to moulding can be effectively preserved by including a phenylmercuric salt. In acid karaya gum waving fluids, as little as 1:100,000 has been found to prevent fermentation and moulding, based on the final dilution. For general purposes it is wiser to increase this somewhat.

The phenylmercuric salts have been found effective against fermentation due to yeast growth, testing 2½ times stronger than even bichloride of mercury, according to Weed & Ecker.

In eye wash and drops, lubricating jellies, nasal jelly, gelatin waving solutions, glue, sizing, starch pastes and bentonite gels among others, these salts are exceedingly effective in a strength of from 1:25,000 to 1:100,000, depending on the product.

USE AS THERAPEUTIC AGENTS

Of course the effectiveness of the phenylmercuric salts in ointments for various yeast, bacterial or fungus infections of the skin is one of the large forthcoming fields of use. In skin ointments intended for treatment of burns, scrapes and scratches, phenylmercuric compounds are very effective in concentrations of from 1:1500 to 1:5000.

COMMERCIALLY AVAILABLE SALTS

The phenylmercuric derivatives are available as chemically pure (CP) and medicinal grades. Wherever the product is intended to come in contact with the skin proper or any of the mucous membranes, only the medicinal grade may be used. For hair waving fluids, the CP grade is all right. For use in preserving glue, sizing and other similar technical products, the CP grade is satisfactory. The price will of course vary with the degree of purity, being the highest for the medicinal grade.

IS MERCURY DANGEROUS?

Mercury and the inorganic soluble salts of mercury are very dangerous. The maximum oral dose of mercurous chloride (calomel) containing 85 per cent mercury is 15 grains. The maximum dose of mercuric chloride (corrosive sublimate also known as bichloride of mercury) containing 74 per cent mercury is 1/15 grain. Ammoniated mercury which is used in bleach creams and some ointments contains 80 per cent mercury, is insoluble in water, has no specified oral dose.

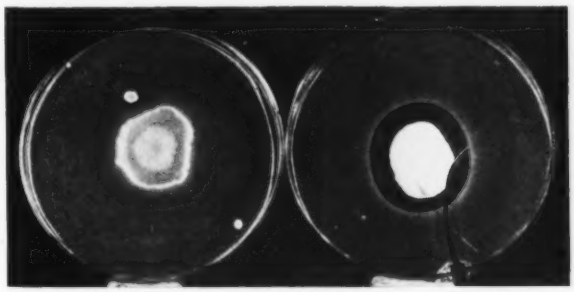
Nineteen foods upon analysis showed 0.009 to 4.368 gamma per cent of mercury; seven others showed no mercury.

Mercury is a natural component of all body tissues, being present in largest concentrations in the skin, hair, and intestines. Tissues of adults and foetis alike show its presence.

Mercurials are used in diuretics, two at least have been approved by the American Medical Association.

The indiscriminately used mercuro-

* Hamilton Laboratories, Inc.



LEFT: View of the cream without antiseptic. RIGHT: The same cream plus 1:25,000 phenylmercuric benzoate.

chrome contains 25 per cent of mercury, and is used by babies, children and adults alike.

Many vaccines are preserved with organic mercurials. Dried blood plasma is preserved with phenylmercuric borate or nitrate as is the distilled water used with it for *intravenous* injection. Each 250 c.c. of regenerated plasma contains 12.5 milligrams of the mercurial.

Capsules of phenylmercuric chloride containing 10 milligrams have been taken three times daily without ill effect.

Without a doubt, the work of the External Products Research Institute is the most exacting and most complete on the dangers inherent to the use of a cosmetic containing mercury. The following are some generalizations freely picked from this work.

The human body stream can handle daily a few thousand gamma of mercury in the form of a soluble mercurial. No dangerous mercury reservoirs are formed as in the case of lead. The exact danger level cannot be given, but it probably lies between one part per million and 20 parts per million, based on total body weight.

The human skin absorbs but 1/3800 of that applied to it. A daily application of 10 per cent ammoniated mercury increased the mercury excreted by 16 gamma daily, and if this total amount were to remain in the body rather than be excreted, it would take about 11 years to reach one part per million. The insoluble mercurials have from four to five times greater safety than soluble ones such as mercuric chloride.

These facts were gleaned to show the safety of ammoniated mercury bleach creams. But some of the data has further significance, reflecting the fate and toxicity of mercury containing compounds.

USE OF THESE SALTS IN CREAMS

A cream containing 1:25.000 of phenylmercuric benzoate will contain 2000 gamma mercury per 100 grams or 20 parts per million. A hundred grams will last from 30 to 90 days. Part of the cream is wiped off, hence the amount of mercury left is only a fraction of this. The phenylmercuric salts have an outstandingly favorable ratio of antiseptic power to toxicity. One 250 c.c. unit of blood plasma contains 12.5 milligrams of phenylmercuric borate. This is equivalent to about 8000 gammas of mercury which in cosmetics would be spread over at least three months. In the dilutions recommended the phenylmercuric compounds are quite safe for use in all types of cosmetics and are desirable as a hygienic measure.

LABELING

The Food, Drug & Cosmetic Act of 1938 requires that the amount and kind of mercurial be stated upon the label, in the front panel. The other ingredients of the formula need not be stated, only state the amount and kind of phenylmercuric salt. See Section 502 (e) which requires that any derivative of mercury (among others) be stated as to kind and amount.

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Infantile Paralysis Control

Some suggestions for limiting the spread of infantile paralysis are contained in a letter from a New York pediatrician to the editor of *The Journal of the American Medical Association* and published in the July 10 issue of *The Journal*. The letter says:

"In view of the approaching season for possible poliomyelitis epidemics, it seems wise to summarize possible suggestions for limiting the spread of the disease. These suggestions are founded on present-day knowledge; viz.:

"In the presence of the disease in a community:

"1. Avoid the use of any water that is possibly contaminated with sewage either for drinking, swimming or washing utensils.

"2. Avoid exhaustion from exertion or chilling. We know that over-exertion and chilling during the incubation period augment the oncoming disease.

"3. Avoid injury to the mucous membranes of the nose and throat, such as that resulting from a tonsil operation. We know that poliomyelitis exposures in the early post-tonsillectomy period are liable to result in severe infections, usually of the bulbar type.

"4. Treat every minor illness as a possible case of poliomyelitis, particularly if there is fever, headache and some spasm of the neck, spine and hamstrings. We know that very mild cases of poliomyelitis without recognizable paralysis are much more numerous than paralytic cases. Suspected patients should be kept quiet in bed for several days, and until passed as well by a competent examiner.

"5. Strive for proper sanitary conditions and, in particular, destroy flies and their breeding places. We know that flies can carry the causative virus of poliomyelitis.

"6. Avoid unnecessary physical contacts with other people, wash hands carefully before eating, and don't put unclean objects in the mouth. We know that many healthy people carry the virus in their intestines and that for some cases, perhaps most, the port of entry of the infection is the mouth.

"7. Don't prescribe or take drugs or chemicals that are intended to protect against the disease. As yet we know of none that will do this.—*Philip M. Stimson, M. D., New York.*"

THE WAR PARADE OF ESSENTIAL OILS AND AROMATICS

As Compiled From Authoritative Market Sources

The *fourth* of a series—
The industry is caught in the vortex of government control of materials needed for war—Price ceilings are applied—Limitation order on essential oils averted—Shipping allocation for imports is secured.
The *fifth* instalment will appear in the September issue.

HARLAND J. WRIGHT, *Publisher.*

IN THE SUMMER and fall of 1942 the United States was cut off from almost 90 per cent of its former sources of supply. To make the picture even darker, those countries abroad which had remained accessible suffered from such a lack of shipping space that goods arrived in dribbles instead of steady flow. In this connection it might be wise to view for an instant the situation in this country as it has developed since our entry into the war. The shortage of certain raw materials necessitated the setting up of strict government control over existing stocks and still available supplies which finally resulted in a complicated system of priorities, allocations, import licenses, price regulations, limitations.

Naturally such critical materials as were necessary for the vast war effort were justly denied for civilian use. For instance, alcohol was first cut to 70 per cent of normal volume and later to 50 per cent. As more and more raw materials for some aromatic chemicals became obtainable only on priority, it resulted necessarily in a tremendous amount of detail work being thrown upon the industry in the filing of complicated forms at every turn in the process of securing materials. This confusion increased progressively and will continue with us undoubtedly throughout the war and well into the post-war period. It became necessary to maintain constant contact with Washington bureaus by mail, telephone and personal visits in order to keep abreast of the exacting requirements of the many bureaus incident to the vast and changing structure of priority requirements. One material after another would come under control necessitating constant adjustments.

As was to be expected the war effort demanded immense quantities of basic chemicals and raw materials heretofore used freely by the manufacturers of soaps, flavors, pharmaceuticals, toiletries, cosmetics and perfumes. The list is too long to recite in detail. In a government Limitation Order L-171 issued July 17, 1942 (AMERICAN PERFUMER, August, 1942) restrictions were indicated upon such materials as alcohol, zinc, titanium oxide, coconut oil, glycerine and others.

As this broad toiletries industry uses perfume oils and compounds in important quantities these difficulties naturally reacted extensively upon the essential oil houses and manufacturers of aromatic chemicals, compounds, etc.

Other limitation orders and restrictive regulations created similar unfavorable conditions as they affected the manufacturers of soaps, pharmaceuticals and flavors.

MAXIMUM PRICE REGULATIONS

On April 28 the general maximum price regulation was issued. This regulation established ceiling prices effective broadly upon the entire industrial framework of the country—including essential oils. The regulation established maximum ceiling prices as of sales made in the month of March, 1942. The seller's maximum price for any commodity became the ceiling price for that commodity, or if no charge was made for the same commodity the maximum price could be that for a similar commodity most nearly like it, or in cases where the seller did not deal in the same or similar commodities the maximum price ceiling was governed by the highest price charged during the month of March by the most closely related competitive seller of the same class for the same commodity or similar commodity.

The result was an immediate slowing up in trading activities pending study of details of the regulation, its import and effect upon each commodity. Obviously all houses did not sell the same commodity at the same price or under the same conditions in March, 1942. Again few houses if any could record a sale on every item in the long list

of essential oils and allied products. It was provided that bona-fide quotations were valid as selling prices. And new products were under the regulation permitted to be priced the same as similar products in the same price class. Gradually interpretations were issued and practices became clearer and procedure clarified as the trade became familiar with the basic intent of the regulation.

ORDERS NOT APPLIED TO ESSENTIAL OILS

About this time the War Production Board, in order to conserve national resources and industrial facilities, placed limitation orders upon many industries. We mentioned Limitation Order L-171 placed upon the toilet goods industry. It seemed at the time that this industry was sufficiently limited by the lack of critical materials, chemicals, etc., having already restricted manufacture. This became apparent later and the order L-171 was cancelled as of October 13, 1942.

However, while limitation orders were popular, the question of limiting the essential oil industry was being considered by the War Production Board. Before such an order was issued, however, opportunity was provided by the War Production Board Divisional chiefs in charge whereby a small group of essential oil houses was given opportunity to informally present a full and complete statement of facts concerning the conditions in the industry brought about by previous shortage of essential oils due to the war developments which had cut these houses off from such a major portion of their important supplies—principally through the collapse of France affecting that country and the French colonies, the entrance of Italy into the war, the occupation of Balkan countries and the Japanese military success in the Dutch East Indies. This left India and South America as the chief sources of supply from which essential oils could be obtained.

It was shown that perhaps 90 per cent of these vital essential oils were not obtainable since the summer of 1939 and later after Pearl Harbor.

Various specific oils were made the subject of consultation and the difficult problems this caused the industry were shown in detail. Where the industry had possibly 10 oils to work with, they now were reduced to three. This necessitated an immense amount of intensive scientific research, endless experimentation, etc., which was being prosecuted by the industry in the production of new combinations, substitute materials and the like. This work was demonstrated by many specific illustrations and it was conclusively shown that the industry, in spite of these tremendous handicaps was, through its unprecedented efforts, able to continue its service which was in large measure satisfactory to the manufacturers of many lines of industrial production in which essential oils, aromatic chemicals and compounds were vitally necessary.

As a result the officials of the various War Production Board Divisions involved came to the conclusion that the essential oil industry was operating under sufficient handicaps as it was and was suffering enough from such shortages and limitations as were already existent. It may be stated that it was further felt the industry was entitled to commendation for its technical accomplishments in being able to make a few oils do the work of many previously obtainable oils, by the magnificent work done in its laboratories which resulted in the production of compounds made from available aromatic chemicals and what small diversity and quantities of natural oils remained available.

Later, as above noted, the limitations order on the cosmetic and toilet goods industry, L-171, was withdrawn.

SHIPPING ALLOCATION GRANTED ESSENTIAL OILS

The fact that the most important sources of supply for essential oils were automatically cut off by the occupation of various countries by the enemy powers might be deemed a rather overwhelming catastrophe for the industry. But yet another obvious obstacle added to its already "brimming cup of woe"! The war demands for and use of shipping facilities was and still is a paramount necessity. The shortage of shipping space was not only acute but naturally it affected imports from the few countries remaining open as sources of supply.

The War Shipping Administration most justifiably allocated shipping space first to war goods and critical materials. In addition speed was necessary and frequently ships would return from those countries with light cargoes simply because time could not be spared for picking up return tonnage. A committee of the War Shipping Administration in conjunction with the War Production Board made a study of shipping needs generally and allocated tonnage to various industries. In their view naturally war demands and essential needs relating to the war efforts most justly must "rule the waves."

However, largely through the timely and intelligent intervention of a group of essential oil dealers the industrial importance of essential oils was properly presented to the committee in charge. The use of essential oils in the manufacture of soaps, flavors, pharmaceuticals and household toiletries was demonstrated, not only for civilian economy, but for the use of all our armed forces in this country as well as abroad and for lend-lease operations. It was shown that essential oils were in a very definite sense "essential." The world-wide sources of all essential oils were charted and production at the sources was shown.

America's 1943 needs for tonnage importation was set forth covering original sources in countries where oils were still obtainable. After very close and fair-minded study by the committee a definite tonnage was recommended and assigned by the War Shipping Administration subject to certain safeguarding rules, which gave the assurance to our industry of receiving fair and equitable shipping space with due regard to the vicissitudes of unavoidable war confusion. A certain one or two oils were placed definitely under the ban but otherwise all available important oils were freely open to import to the limit of tonnage allocation assigned and use of available facilities—*(To be continued.)*

Short Adages

by R. O'MATTICK

JUNE IPPERE, who has been hearing much about shortages of bottles and solvents at the summer home of Dr. Rowmateral, is wondering why her brilliant uncle cannot discover substitutes for such simple things as glass and alcohol, since he has been able to make Eau de Cologne without using water from that city.

* * *

But Dr. Rowmateral's mind is not on any substitutes right now. Up in his mountain retreat, relaxing from the cares of a weary year, he is sipping his favorite drink of scotch, a little ginger-ale, some ice and a drop of the volatile oil from *Mentha piperita L.* The drop of peppermint is there because the Doctor cannot get away from the business of Essential Oils even when downing a drink up in the mountain. And the drink (to him) tastes better than ever now that the OPA is doing something about price-ceilings for Peppermint and for Spearmint. In fact, Dr. Rowmaterial is thinking of modifying his drink by the addition of a drop of Spearmint but he is waiting to see what really happens among the growers, producers, distributors, farmers, brokers and the officials before he makes any move.

* * *

Do you recall, as a schoolboy, when you had to write a composition or letter and you weren't sure how to spell "receive," you used another word like "get." Well, we saw the letter, recently written by (we won't say it was a government official—but you cannot be thrown into jail for thinking your thoughts)—and although it was all about price-ceilings—the word price-ceiling didn't appear in the letter even once. There was "highest-price" and "maximum-price" and "peak-price" and even "top-price" but no "ceiling-price." We got the creepy feeling, somehow, that the writer of the letter and his secretary also, didn't know how to spell "ceiling" so they used a bunch of other words. How do you spell it?—ceiling or cieling?

* * *

Sometimes, we wish they would use the term "price-roofing" instead of "price-ceiling." Not only would it be easier to spell, but we can think of other good reasons. First of all, our limited experience with homes teaches us that while ceilings usually crack, it is the roofs that generally leak and many ceilings have been leaking rather than cracking. Also, a ceiling is a sort of inside roof but a roof is sort of outside all the time. You look up at a ceiling if you are inside but you look down on a roof if you are outside and are high enough. This is all getting kind of complicated just like price-ceilings but we had a thought somewhere and it got mixed up. We wish some plasterer would come around and fix up the cracks in the ceilings. Some of our friends want to tear down the whole house and put on a new roof or at least raise the roof. No, the architectural idea is still confused in our mind so we'll get away from it and talk about automobiles.

* * *

Now that a chain of automobile-supply stores, having few tires to sell, will market toiletries—you will soon see a sign like this:

"HAVE YOU CHANGED YOUR
BEAUTY OIL TODAY?"

or perhaps and perhaps.

"WINDSHIELD FACE POWDER IN
3 SHADES:
CARBURETER
CAR PERFORMANCE
MOTOR RHYTHM"

* * *

But the days that Pat Chouli predicted long ago, when cosmetic houses would give an automobile with each bottle of toilet water haven't arrived.

* * *

Away from cars and cares, we are hiking up the hill (on foot) back to Dr. Rowmateral's retreat on the mountain. He is on his fourth or fifth of the v.o. from *Mentha piperita L* and all that goes with it.

* * *

"It was my first trip to the island, back in 1919," he began, also beginning his sixth. "Bringing to a conclusion some matters in Messina, I set off for Milazza, a small Sicilian town sticking out into the blue Tyrrhenian Sea. Before the fast trains Mussolini introduced (which some near-sighted Americans admired) we rode the forty kilometres by mule. My guide and interpreter was a ferocious-looking bandit, in keeping with the wild scenery and the reputation of the region. But he respected me. He informed all whom we met that I was one of the *cavalieri* who could read and write and came from a land that had no taste for fighting.

My guide and bandit explained that I came three thousand miles to buy sundry oils to please the ladies in America.

"'Remarkable,' said one of the other *bersaglieri*, 'that a learned man who can actually read and write should do such a silly thing!'"

* * *

Pat Chouli, who is always out for bigger and better business says the secret is to convert difficulties into advantages. When we pinned him down to specific cases the best he could do was to suggest that someone put out hair tonics, toilet-waters or lotions in carboy containers to solve the problem of unit bottle restrictions. Nothing downs Pat. "Look at the Essential Oil business," said he. "Many favorite foods are curtailed—more food flavors, sauces and condiments are being used to season the foods that are not so favorite. Women can't dab so much toilet waters on their necks because of alcohol curtailment—they dab more leg make-up on their legs because of the hosiery shortage.

"The Doctor's working on a substitute to end all substitutes!"

Historical Notes on Thymol and Other Isopropyl Cresols

Some methods for the manufacture of thymol given—from para-cymene, from piperitone, from meta-cresol . . . Many isomers also formed in production of thymol from cresol

by DR. HERMAN WACHS

Chief Research Chemist, Dodge & Olcott Company, New York, N. Y.

MANY centuries ago oil of thyme was known and used but the first mention of thymol crystals dates back to 1719 when C. Neuman spoke of a crystalline body separating out of oil of thyme and called it "Thyme-Camphor." Lallemand examined the crystals separating out of oil of thyme in the year 1853 and he named them "Thymol" (1).

For a considerable time pure thymol crystals were obtained by alkali extraction of thymol-bearing oils. Practically all the thymol produced today is synthetic. Three raw materials are available and have found practical application: para-cymene, piperitone and meta-cresol (2).

THYMOL FROM PARA-CYMENE

Spruce turpentine contains about 80 to 85 per cent para-cymene and may be used as a convenient raw material. Upon sulfonation and caustic fusion a mixture of carvacrol and thymol is obtained, which may be separated with the aid of lead acetate (3). If the sulfonation is properly controlled and only one sulfo-group enters the molecule, thymol and carvacrol are the only isopropyl cresols produced. It is also possible to obtain thymol from cymene by a different approach. Cymene, when nitrated, will give 85 per cent of 2-nitrocymene (4). This may be transformed into thymol through the following stages:

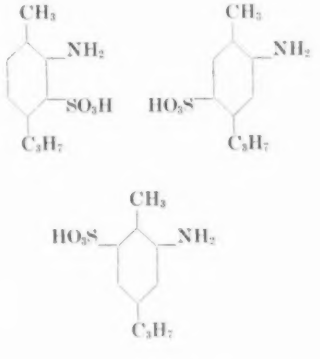
2—Nitrocymene, 2—aminocymene, 2—aminocymene—5-sulfo-acid, cymene-5—sulfoacid thymol (5). A sulfonation is involved in this process also and three aminocymene-sulfoacids are possible.

Removal of the amino-group and treatment of the sulfo-group with alkali will in this process also produce a mixture of thymol and carvacrol. A more clean-cut reaction is the following:

2—Nitrocymene is reduced by aluminum amalgam and water to 2—hydro-

Dr. Herman Wachs

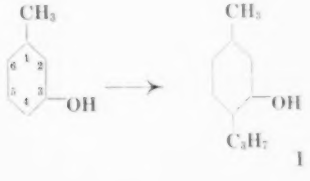
xylaminocymene. This is transformed with dilute hydrochloric acid into 2—amino 5—oxycymene, which gives thymol upon removal of the amino-group. (6)



Piperitone or D—1—menthenone is the main constituent of oil of eucalyptus dives. Through oxidation with iron chloride in acetic acid or catalytic dehydrogenation thymol is obtained practically free from accompanying isomers (7).

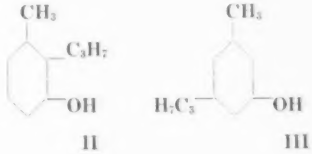
THYMOL FROM META-CRESOL

Thymol may be produced from meta-cresol by the introduction of the isopropyl-group into the cresol molecule.

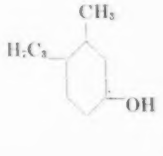


I

This reaction may be achieved by the treatment of meta-cresol with propylene, isopropylether or isopropylalcohol with various condensing agents (2). It is obvious that a number of isomers may form in this reaction. The isopropyl-group may enter into positions 2, 5 and 6 besides 4 and these compounds will be formed in addition to thymol:



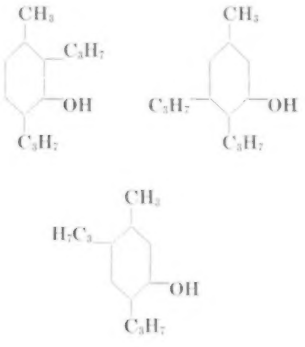
II III



IV

Each one of these isomers while under the action of the condensing

agent may add an additional isopropyl group into the molecule and the following compounds may be obtained from thymol. (1)



The isomers II, III and IV will also yield three di-isopropyl cresols. The di-isopropyl cresols thus formed, while subject to the action of the condensing agent may each be further isopropylated and simple arithmetic will show that the introduction of the isopropyl group into the metacresol molecule will produce this sum of isopropyl-cresols:

4 Mono-isopropylmeta-cresols
6 Di-isopropylmeta-cresols
4 Tri-isopropylmeta-cresols
1 Tetra-isopropylmeta-cresol

15 Isopropylmeta-cresols

If, instead of pure meta-cresol, a meta-para-cresol mixture is used, the para-cresol present reacts similarly and one obtains:

2 Mono-isopropylpara-cresols
5 Di-isopropylpara-cresols
4 Tri-isopropylpara-cresols
1 Tetra-isopropylpara-cresol

12 Isopropylpara-cresols

Ortho-cresol, when condensed with propylene will react under formation of

4 Mono-isopropylortho-cresols
6 Di-isopropylortho-cresols
4 Tri-isopropylortho-cresols
1 Tetra-isopropylortho-cresol

15 Isopropylortho-cresols

When USP cresol, which is a mixture of ortho- meta- and para-cresol is isopropylated, the resultant product will therefore contain:

15 Isopropylmeta-cresols
12 Isopropylpara-cresols
15 Isopropylortho-cresols

42 Isopropyl-cresols

In the above tabulation we have not taken into account the fact that all the cresols or isopropyl cresols formed are subject to ether formation with isopropyl alcohol, which complicates the picture still further.

On page 544 of the last edition of Beilsteins "Handbuch der Organischen Chemie" is listed the compound "3—oxy — 1 — methyl-x-isopropyl-benzene." Its preparation is described thus: A mixture of 10g. meta-cresol, 7g. isopropyl alcohol and 20 to 25g. anhydrous magnesium chloride are heated for two hours at 180 deg. then six to eight hours at 200 deg. in a closed tube. The gases formed are released from time to time by opening of the tube. Water and hydrochloric acid are then added, the separating oil is fractioned and the fraction boiling between 210 and 260 deg. is treated with dilute caustic potash, which leaves 3-methyl-xx-di-isopropyl phenol as an insoluble oil (8). The alkaline solution is extracted with ether and saturated with hydrochloric acid. The precipitated oil is fractioned. At a temperature of 237.7 deg. an oil is obtained which will not solidify in an ice-salt mixture. The reference given for this preparation is: Mazzara, *Gazetta Chimica Italiana* vol. 12, p. 505. This reference dates back to the year 1882. It is reasonable to assume that at the time that paper was written, fractionation methods were not sufficiently developed and that Mazzara had at his disposal at best an enriched meta-cresol, still containing some ortho- and para-cresol. Subjecting his meta-cresol to the action of isopropyl alcohol he may very well have obtained the above mentioned total of 42 isopropyl cresols and some ethers.

It has been attempted to indicate here how many side reactions are possible in the preparation of thymol crystals by synthesis. In spite of all the difficulties the above mentioned three raw materials—para-cymene, piperitone and meta-cresol—have found commercial application.

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[8] Here it may be pointed out that the methyl di-isopropyl-phenols are completely soluble in dilute caustic potash.

Bacteria Found in Cosmetics

by DR. MILTON HERBOLD*

THE following is a list of organisms that are commonly found in most cosmetics, as well as in the atmosphere, on the human skin and in most raw materials used in preparing cosmetics.

Bacteria

Staphylococcus aureus
Staphylococcus albus
Bacillus cholorae
Eberthella typi
Bacillus subtilis
Streptococcus hemolyticus
Bacillus lipolyticum
Micrococcus tetragenus
Bacillus proteus
Bacillus putrificus
Escherichia coli
Clostridium botulimum
Various species of Pseudomonas and Achromobacter

Fungi

Aspergillers
Penicillium
Mucor
Rhizopus
Cladosporium

Probably the most important function of these organisms as far as the manufacture of cosmetics is concerned, is their metabolism. There are three major requirements for the metabolism: 1. Moisture, 2. Nitrogenous substances, 3. Mineral salts.

Any preparation with less than three-tenths per cent of moisture is not inducive to the growth of the organisms. Most refined oils and waxes contain less than ten organisms per gram. The bacterial count on waxes and oils is often determined with a great deal of difficulty on account of immiscibility with aqueous solutions. However, if these oily substances are emulsified with sodium oleate until the globules are less than ten microns in size, a reliable count may be made.

Most of the organisms are capable of producing lipolytic enzymes. Some of these enzymes are maintained within the cells, but more often they are diffused into the surrounding media. When this occurs, fatty acids after being hydrolyzed are attached by the lipasos and broken down into their corresponding glycorides. Since the glycerides are soluble in water and are closely related in chemical structure to carbohydrates they are easily utilized as food by bacteria, being broken down to carbon dioxide and water. The importance of keeping lotions and creams containing glycerine free of these lipaso-producing organisms, can readily be seen. Other compounds are also produced by this enzymatic reaction; mainly the aliphatic alcohols, aldehydes and acids. If protein is present in the solution, ammonia is formed and this with fatty acids produces ammonium soap. Alkali carbonates are produced by bacterial oxidation of salts of organic acids, giving similar results.

* In report to California Cosmetic Assn.

"Gather Ye Markets While Ye May"—In War Plants

Cosmetic consciousness is a natural development of women in industry, never before out of the home . . . This tabulation gives a good basis to form a sales plan for present and future customers

THE AVERAGE amount of money spent each month by women war workers for cosmetics in 1942 was $2.44, according to the first supplement to the survey of cosmetics in the St. Louis market made by the St. Louis *Globe-Democrat*.

The foregoing figures are in addition to the established cosmetic market in the St. Louis area made up of thousands of women not engaged in war work.

WHERE WAR WORKERS PURCHASE

As there are almost twice as many women war workers in that territory this year, the data indicates that the average woman war worker will spend $2.37 per month for cosmetics. In order to compare the cosmetic habits of today with those of six months ago, Miss Irene Stanley, Beauty Editor of the St. Louis *Globe-Democrat*, personally interviewed many war workers so as to get an accurate birds-eye view of the whole situation. According to the carefully compiled data, war workers buy cosmetics chiefly in department stores. The percentages of cosmetics sold at various outlets are as follows:

	Per Cent
Department Stores	39.9
Drug Stores	29.5
Syndicate Stores	26.4
Other Stores	4.2

In making its survey, the enterprising *Globe-Democrat* conducted a charm school every Tuesday and Friday night in the USO centers for women war workers, at which personality and charm lectures were given by competent authorities. It is pointed out that the market for cosmetics among war workers presents an opportunity for continued patronage for many years to come, as the buying habits of later years may be molded now. Some of the statistics as to how war workers buy cosmetics follow:

FACE POWDER

The figures show that office workers buy 100 per cent face powder and factory workers 98 per cent. Leaders in the line for this market are:

Manufacturer	Per Cent
Coty	20.5
Max Factor	12.2
Pond's	7.6
Lady Esther	7.6
Woodbury	6.5

Other brands purchased are:

Ar-ex	House of Base
Avon	Jergens
Belcona	Lelong
Campus	Leonore Dee
Charles of the Ritz	Luxor
Constance Bennett	Merle Norman
Delettrez	Park & Tilford
Dorothy Gray	Primrose House
Elizabeth Post	Richard Hudnut
Elmo	Tayton's
Frances Denney	Yardley
Gemey	Evening in Paris
DuBarry	Perc Westmore

HAIR PREPARATIONS

Statistics show that office workers buy 35.1 per cent while factory workers buy 34.7 per cent. Preferences are:

	Per Cent
Drene	27.3
Fitch	16.4
Halo	14.5
Mar-O-Oil	9.1

Other brands purchased are:

Brilliantine	Merilla Shampoo
Castile	Stylis Shampoo
Coconut Oil	Three Flowers
Prescription	Brilliantine
Lucky Tiger	Shampoo
Lux Soap	Vita Fluff
La-Nu	Vaseline
Max Factor	Watkins

NAIL POLISH

Factory workers buy 56.4 per cent and office workers 61.4 per cent according to figures. Preferences are as follows:

	Per Cent
Revlon	35.9
Cutex	28.3
Dura-Gloss	13.0
Chen Yu	6.5

Other brands purchased are:

Avon	Peggy Sage
Contoure	Sue Pree
Ching	Waxy Protector
Lady Esther	Glazo
Miraglo	

HAND PREPARATIONS

According to figures office workers buy 68.4 per cent and factory workers buy 57.4 per cent. Preferences are as follows:

	Per Cent
Jergens	24.7
Pacquin's	19.6
Pond's	7.2

Other brands purchased:

Avon	Glycerine & Camphor
Ar-ex	Itasol
Creme Softener	Hinds
Cashmere Bouquet	Lady Esther
Chamberlain	Landers
Campana	Luxor
Belcano	Mary Lowell
Dorothy Gray	Olive Oil
Delettrez	Perfection
DuBarry	Sofskin
Elizabeth Post	S.V.B.
Harriet Hubbard Ayer	Vi-Jon
	Woodbury

DENTIFRICES

Office workers buy 85.9 per cent and factory workers 72.3 per cent according to figures. Preferences are:

	Per Cent
Colgate	30.3
Pepsodent	18.0
Dr. Lyons	15.6
Ipana	14.0

Other brands purchased are:

Albodon	Kolynos
Calox	Revelation
Dr. West	Sy-lac
Iodent	Squibb
Listerine	Teel
Pycope	Vince
Phillip's	

DEODORANTS

Office workers buy 73.7 per cent and factory workers 74.3 per cent according to figures. Preferences are:

	Per Cent
Mum	34.2
Arrid	17.9
Fresh	7.7
Odorono	7.7
Park & Tilford	4.3
Stop	3.4

Other brands are:

Ardor	Quest
Ar-ex	Pond's
Avon	Richard Hudnut
Amolin	Sta-Sweet
Dew	Snow Mist
Hush	Sofskin
Mary Lowell	Shulton's Old Spice
Marvelous	Yodora
Neet	Zip
Phillip's	

DUSTING POWDER

Figures show office workers buy 36.8 per cent and factory workers buy 38.6 per cent. Preferences are:

	Per Cent
Shulton	13.4
Cashmere Bouquet	10.0
Coty	10.0
Evening in Paris	8.3
Mavis	8.3

Other brands purchased are:

Ar-ex, Avon, Amoray, Carlova, Colgate, Dorothy Perkins, Dorothy Gray, Dubarry, Helena Rubinstein, Harriet Hubbard Ayer, Lavender, Lentheric, Richard Hudnut, Talcum Powder, Vi-Jon, Gardenia

COLOGNE

Office workers buy 64.9 per cent and factory workers buy 46.5 per cent. Preferences are as follows:

	Per Cent
Lentheric	19.1
Coty	15.5
Evening in Paris	15.5
Shulton's	9.5
Helena Rubinstein	7.1
Richard Hudnut	7.1

Other brands purchased are:

Avon, Carlova, Dorothy Perkins, Doc Perry, Faberge, Frances Denney, Harriet Hubbard Ayer, Houbigant, Leone Lorraine, Lucien Lelong, Luxor, Prince Matchabelli, Wrisley, Yardley

PERFUME

Figures show that office workers buy 43.8 per cent and factory workers 45.5 per cent. Preferences are:

	Per Cent
Evening in Paris	47.9
Coty	21.1

Other brands purchased are:

Avon, Ben Hur, Frances Denney, Helena Rubinstein, Jergens, Lentheric, Lucien Lelong, Park & Tilford, Houbigant, Prince Matchabelli, Richard Hudnut, Ballet #1, Shulton

FRESHENER

Office workers buy 10.5 per cent while factory workers buy 27.7 per cent according to figures. Preferences are:

	Per Cent
Max Factor	17.7
Coty	8.8
DuBarry	8.8

Other brands purchased are:

Avon, Constance Bennett, Delettrez, Dorothy Gray, Evening in Paris, Lady Esther, LaDonna, Lentheric, Moler, Pond's, Richard Hudnut, Seventeen, Tayton, Witch-hazel, Woodbury

CLEANSING CREAM

Figures show that office workers buy 57.8 per cent and factory workers 61.3 per cent. Preferences are as follows:

	Per Cent
Pond's	17.9
Lady Esther	16.8
Max Factor	9.5
Woodbury	7.4
Coty	6.3
Delettrez	5.3
DuBarry	5.3

Other brands purchased are:

Avon, Almond Meal, Ar-ex, Belcona, Constance Bennett, Dorothy Gray, Daggett & Ramsdell, Elmo, Harriet Hubbard Ayer, Jergens, LaDonna, Luxor, Merle Norman, Marrow's, Park & Tilford, Phillip's Milk of Magnesia, Seventeen, Tayton, Yardley

LIPSTICK

Office workers buy 100 per cent while factory workers buy 98 per cent. Preferences are:

	Per Cent
Coty	17.3
Max Factor	12.8
Pond's	7.1
Tangee	6.4
Avon	5.1
Revlon	4.5
Evening in Paris	3.9

Other brands purchased are:

Ar-ex, Belcona, Constance Bennett, Cara Nome, Campus, Cashmere Bouquet, Charles of the Ritz, Delettrez, DuBarry, Dorothy Perkins, Dorothy Gray, Elmo, Elizabeth Kent, Elizabeth Post, Elizabeth Arden, Frances Denney, Flame-Glo, Houbigant, Helena Rubinstein, Kiss Proof, Lady Esther, Lucien Lelong, Luxor, Merle Norman, Prince Matchabelli, Marrow's, Princess Pat, Perc Westmore, Park & Tilford, Richard Hudnut, Tayton, Tweed, True Life, Woodbury, Yardley

ROUGE

Factory workers buy 71.9 per cent while office workers buy 57.4 per cent. Preferences are:

	Per Cent
Coty	16.2
Max Factor	16.2
Evening in Paris	9.1

Other brands purchased are:

Ar-ex, Avon, Belcona, Constance Bennett, Charles of the Ritz, Campus, Checktone, DuBarry, Elmo, Elizabeth Arden, Elizabeth Post, Elizabeth Kent, Flame-Glo, Frances Denney, Heather, Luxor, Lady Esther, Marvelous, Merle Norman, Pond's, Park & Tilford, Perc Westmore, Richard Hudnut, Tangee, Tayton, Woodbury

POWDER BASE

Figures show that office workers buy 54.3 per cent, factory workers 45.5 per cent. Preferences are:

	Per Cent
Max Factor	31.7
DuBarry	11.4
Cotys	6.3
Powder Base	6.3

Other brands purchased are:

Ar-ex, Belcona, Campus, Constance Bennett, Elizabeth Arden, Elmo, Frances Denney, Jergens, Lady Esther, Merle Norman, Moler, Pond's, Perc Westmore, Phillip's Milk of Magnesia, Richard Hudnut, Tayton, Woodbury

EYE MAKE-UP

Office workers buy 26.3 per cent, factory workers buy 26.7 per cent. Preferences are:

	Per Cent
Maybelline	73.8
Max Factor	7.1

Other brands purchased are:

Avon, Boyer, DuBarry, Mascara, Revlon, Richard Hudnut, Tatoo, Winx

An interesting sidelight is also revealed by the fact that 57.9 per cent of the office workers patronize beauty parlors, whereas the factory workers patronize them to the extent of 74.3 per cent. Approximately the same proportions get permanent waves and have their hair shampooed and set. A much smaller proportion, 13.9 per cent, have their nails manicured.

Grass Oils in Americas

Before the war, the Netherlands Indies had a monopoly on valuable grass oils, such as vetiver, citronella oil and lemon oil.

The work of Dr. V. C. Dunlap, a Cornell plant pathologist associated with a Honduran farming company, provides a significant example of how new crops are expanding in the New World. On March 1, 1941, Dr. Dunlap set out 65 heads of citronella grass. By June, the number of plants had grown to 596. By the beginning of 1942, he had more than an acre of the grass. In six months, this had increased to 50 acres—and by the end of 1942, it had climbed to 250 acres. By the end of 1943, it will probably be at least 8,000 acres—enough to establish citronella as a stable crop for Central America. Lemon grass also is now being grown in Guatemala. The various oil grasses can be harvested three or four times a year, with oil recovery ranging from 90 to 250 pounds an acre for each harvest.—*Nation's Business.*

A Study of the Japanese Oil of Peppermint Industry

A second in a series of three articles on Japanese peppermint industry . . . Comparison of characteristics of the Japanese oil with that of European and United States

by DR. ERNEST GUENTHER

Chief Research Chemist, Fritzsche Brothers, Inc., New York, N. Y.

THE NUMBER of harvests per year varies in the different mint growing districts. The Prefectures of Hiroshima and Okayama (near Kobe) which are the main producing centers of Southern Japan, have three harvests a year —one in June, one in early August, and one in October-November. In the Prefectures of Niigata and Yamagata, Central Japan, only two yearly crops can be gathered—one in early July and one in October. Further north the harvests are less frequent; in Hokkaido, for instance, only one takes place annually.

Harvesting requires special care because improper methods might seriously lower the quality of the oil. The day should be bright and cutting should not start before the dew has disappeared. The most suitable period is the time when the buds are still tight but ready to bloom out. The relatively early harvest probably explains the high content of menthone (6 to 18 per cent and even more) in Japanese mint oil. Menthone possesses a decidedly bitter, somewhat harsh aroma. A content of more than 15 per cent menthone has, therefore, quite an unfavorable effect upon the odor and flavor of the oil. Rutowski and Trawin,[7] two Russian investigators, found that the menthol content increases with the growth of the plant, while the percentage of menthone decreases.

MENTHOL MAINLY IN LEAVES

Menthol seems to occur mainly in the leaves, very little in the stems. On bright summer days it can be seen on the leaves in the form of powdery, fine crystals which disappear toward evening and do not reappear until the sun is well up the next day. For this reason, the harvesting should take place on bright, hot days when the sun is high above the horizon.

[7] *Riechstoff Industrie* 4 (1929), 124.

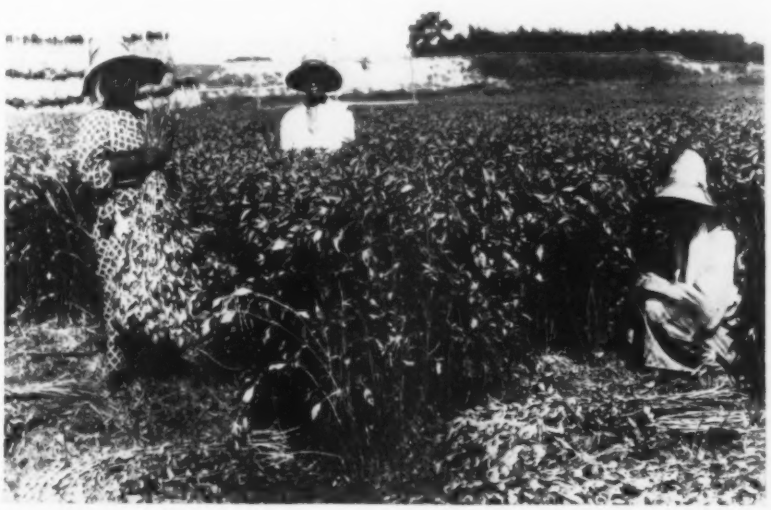
The cut plants are immediately tied in bundles, hung under sheds and dried. Drying takes from ten days in summer to thirty days in fall, the best state of dryness being about 75 per cent, that is, not completely crisp. Care is taken to prevent the leaves from falling off during the drying process. Some growers dry the plants in the sun, but this is considered unsatisfactory because of oil loss due to evaporation. Besides, there is the danger of damage from storms. The bundled herb material must not be allowed to ferment.

AMERICAN PRACTICE

It might be interesting to note, in this connection, that the American peppermint oil producers in the Middle West leave the cut plants in the fields for twenty-four hours or more, until almost fully dried. This not only facilitates distillation (easier packing in the stills and less steam consumption), but also yields oils with a low resin content. Exposure of the plant material to sunlight converts those oil constituents which easily resinify into resins, which are non-volatile and do not distill over.

The Japanese producers, on the other hand, prefer to dry the plant material only to "clover dryness," and avoid exposure to sunshine. Therefore, the resins are formed not in the plant but by gradual polymerization of certain compounds in the distilled oil. Thus, Japanese mint oils frequently show a relatively elevated content of resins which are partly responsible for the harsh, bitter after-taste.

There exist in Japan only small producing units, operated by small growers, the construction of large, modern distilleries having been found too costly. The limited size of Japanese stills does not permit immediate processing of the large amounts of plant material accumulated during the height of the



Mint gatherers harvesting annual mint crop on island of Hokkaido, Province of Kitami

harvest. If stacked up in wet condition, the plants would soon ferment and deteriorate. Dried, the plants can await distillation until the capacity of the small stills allows it.

DISTILLATION

The herb material is distilled in rather primitive stills scattered throughout the producing regions and owned by the grower-distillers who sell the natural, crude oil to large firms. These firms operate modern plants equipped for separating and recrystallizing the menthol and rectifying the residual oil.

TYPES OF APPARATUS USED

The field distillers employ several types of apparatus, some of them rather primitive and antiquated.

1. The so-called "box" stills. They are somewhat more efficient in regard to capacity and, therefore, slightly more popular. However, initial cost of installation is higher, because of the difficulty of making the wooden boxes steam tight.

2. Stills made of wooden barrels. They are somewhat cheaper to install but hold less plant material.

3. Many producers employ today regular metal stills such as generally used for the distillation of aromatic plants. The steam is generated in a separate steam boiler. Much progress has lately been made replacing the old-fashioned Japanese mint stills with modern equipment.

BOX METHOD OF DISTILLATION

When distilling by the "box" method, several wooden boxes with bottoms removed are stacked on top of an iron kettle filled with water. The boxes, 1.3 meters high and 1.2 meters wide, are filled with mint herb and all crevices sealed with cloth or clay. From the top of the uppermost box a metal gooseneck leads spirally into the condenser. The water in the kettle is heated to the boiling point, and steam carries the vaporized essential oil into the condenser to be cooled and reliquefied there. Although this method permits handling a comparatively large quantity of herb at one time, it is rather difficult to distribute the steam evenly through the boxes and to prevent its escape through the joints. For this reason, the method is gradually being replaced, particularly in the Prefectures of Hiroshima and Okayama, by "barrel" stills.

BARREL STILLS

Distillation in "barrel" stills proceeds as follows: A bamboo screen is placed on top of the water kettle which has a diameter of 1.2 meters. A wooden barrel, bottom removed, is filled with 190 to 300 kilos of herb and placed on the screen. From the top a spiral pipe leads to the condenser.

Distillation by either the "barrel" or the "box" method requires approximately three to six hours, depending on the size of the condenser. Repeated distillation of the same plant material is often necessary in order to extract all the oil.

The crude oil is finally shipped to the refiners in Kobe and Yokohama.

YIELD OF OIL

It is claimed that 82 pounds of dried herb from the first crop yields 14 ounces of oil; from the second crop, 24 ounces; and from the third crop, 21 ounces. Thus, the oil yield of the first crop is about 1.1 per cent, that of the second 1.8 per cent, and that of the third 1.6 per cent. A field giving 300 pounds of herb material at the first cutting yields 800 pounds at the second and 600 pounds at the third cutting. One acre yields approximately 5,000 pounds of dried herb which, upon distillation, gives about 80 pounds or 1.6 per cent of oil.

ISOLATION OF MENTHOL

The processing is done in large factories owned by the well known mint and menthol concerns. The natural oil is placed in metal containers 60 by 90 by 15 centimeters in dimension, and covered with a mixture of ice and salt for about twenty-four hours. Then the dementholized oil is drawn off through a cock at the bottom of the containers. The menthol crystals thus obtained are recrystallized, in order to remove all impurities, dried for several days at room temperature, and finally packed. Natural mint oil yields about 50 per cent dementholized oil and 50 per cent menthol, but this ratio varies with the free menthol content of the crude oil. France, Great Britain and Germany have been the principal buyers of the dementholized oil; sales to France and Germany were effected mostly via the London market.

JAP MINT NOT IN U.S.P.

Japanese mint oil is not included in the United States Pharmacopoeia which recognizes only peppermint oil from *Mentha piperita* and, therefore, it cannot be used in official medicines of the United States. In fact, the oil cannot be imported into this country unless labeled *Mentha arvensis*. When dementholized, that fact, too, must be indicated on the label and information given to the authorities as to its ultimate use.

The dementholized oil still contains a good percentage of menthol and therefore has considerable usefulness. It is supplied in two grades as follows:

1. The crude dementholized oil. Shipments of this grade have been made to the United States under the name of "cornmint oil."

2. The thrice rectified dementholized oil. It is sold mainly to Scandinavia.

U. S. AND EUROPEAN vs. JAP MINT

Mentha piperita is said to be hardier and more resistant to insects and diseases than *Mentha arvensis*. The latter does not stand up very well in the cold winter climate of our American Middle West. The first crop of *Mentha piperita* is usually larger than that of *Mentha arvensis*, but then growth slows up and the second yield is smaller than the first. In odor and flavor the American and European oil is superior to the Japanese oil, for which reason the former is preferred for flavoring tooth pastes, chewing gums, and confectionery.

The Japanese oil has a strong, herby odor and somewhat bitter, pungent taste. Its chief advantage is its higher menthol content; therefore, it is used mainly for the production of menthol crystals.

JAPANESE NATURAL MINT OIL

The extreme limits are about one million to two and one-half million pounds, although the latter figure has never actually been reached. On the average, production amounts to about two million pounds; 1937 was a banner year.

EXPORT FIGURES

Before the outbreak of the present war, Japan used to export from 500,000 to 900,000 pounds each of dementholized mint oil and menthol, supplying about 70 per cent of the world's total consumption of these products. After 1938, the export figures for this oil were not available.

PACKING

Menthol is shipped in five-pound tins, one dozen to a case. Mint oil, too, is shipped in five-pound tins. The packing is done by hand. Due to the availability of cheap labor, machinery is used only to a small extent.

PRODUCERS' ASSN. AND COOP.

For some years Japan's five largest producers of menthol have been combined in an association known as S-K-Y-N-T, a name derived from the first letters in the names of the member companies:

1. Suzuki Menthol Co., Kobe
2. Kobayashi, Kobe
3. Yazawa, Kobe
4. Nagaoka, Kobe
5. Tase, Tokio

Distillation of herb materials by primitive "Barrel" method takes from three to six hours.

With the exception of Messrs. Tase, in Tokio, all the companies have their head offices in Kobe, the main shipping port of menthol and mint oil.

These firms purchase more than 80 per cent of their oil from the small grower-distillers and produce only a small portion from plants raised on their own fields. They rectify the natural oil in their refineries, and sell the isolated menthol either directly abroad or to exporters in Japan. It is a fact that during past years about 80 per cent of the dealings and exports of Japanese dementholized mint oil and menthol were handled through speculators and, therefore, prices in New York were often lower than those quoted in Japan.

COOPERATIVE SOCIETIES

A few words should should be added about the Federation of Cooperative Societies of Hokkaido, "Hokuren," organized in 1919, with head office in Sapporo, Hokkaido; this organization comprises about 400 member cooperatives to which it extends many facilities such as banking, financing, supplying with purchased or manufactured articles, buying or accepting on consignment produce of member societies, warehousing, etc. The main articles dealt with are beans, rapeseed, linseed, mint oil and menthol, pyrethrum flowers, potato starches, vegetables, eggs, refined honey and marine products. About 80 per cent of Hokkaido's production is handled through "Hokuren." They refine the natural oil of the member cooperatives and also sell it to other refiners, particularly to the S-K-Y-N-T.

Aside from the above mentioned producers of menthol, we should also mention Mitsui and Mitsubishi, the two well-known large trusts, although they do not manufacture menthol. Before the war, they exported to the United States menthol and crude, dementholized oil under the label of "cornmint oil," also dementholized triple rectified oil. Years ago, small quantities of natural oil were exported to Germany, but that practice has been stopped by the Japanese government because it is more profitable to do the rectifying and dementholizing in Japan.

(*Continued in September issue*)

Post-War Air Transportation

Considerable speculation is going on in the public mind as to the possibility of the airplane replacing the railroads and steamship lines as a means of transportation, especially as regards freight and cargoes. An analysis of the problem shows that this danger is quite remote. In wartime, cost is of no moment; speed is the predominating factor; but in peacetime cost is paramount, not speed.

W. A. Patterson, president of United Air Lines, has made a careful comparison between the transportation costs of equal cargoes by rail and water, and by water and air with the following results: The cost by air exceeds rail transportation by 35 times; water by 250 times. These figures include the number of trips necessary to transport equal cargoes, fuel costs, employee remuneration; in fact, total costs of operation based on 1940 estimates.

In considering the cost of transportation of passengers the figures are more comparable and air travel may well take over a large share of the volume. Then it must be remembered that, as Mr. Patterson stated, "Individuals are also influenced by consideration of convenience, comfort and such other intangibles as romance and prestige associated with travel by air."

Research on Glycerine

Due to the enormous demand for alkyd resin paints by the Army and Navy, the Glycerine Producers Association has placed resins first on its research program. Looking forward to post-war demands, the Association sees important prospects for glycerine in the food industry.

With phthalic anhydride, glycerin is an essential ingredient for the alkyd resin paints which are used universally to protect our military equipment. Estimates show that 42 per cent of the 1943 glycerine production available after fulfilling lend-lease requirements will go into these extra-tough coatings. It is expected that 23 per cent of the 1943 absolute glycerine production will be used for explosives.

Resins were one of the first subjects investigated when the Association's research work began 17 years ago. When it became evident that glycerine was an essential war product, the Association placed its laboratory facilities at the disposal of the WPB and the Food Distribution Administration.

Patents for Small Plants

Enemy patents, seized as a result of the war, and now in the possession of the Alien Property Custodian, have been made available to the operators of small war plants, it was announced July 29th by Brigadier General Robert W. Johnson, chairman of the SWPC, whose office has worked out the details with Leo T. Crowley, Alien Property custodian. Up to now only larger firms have reviewed available alien patents and have applied for non-exclusive licenses under which the war effort and post-war development may be implemented.

An index of classified patents will be furnished upon request and then "The issue of the patent papers, drawings and specifications by the custodian," SWPC said, "enables the applicant to determine in his own plant the value to him of those available."

Once licensed under an alien patent, small plants will get technical assistance through any one of several government agencies. In some cases SWPC will even assist in financing.

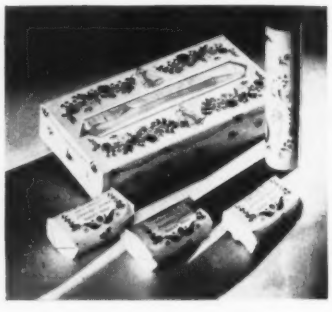
BOURJOIS: Courage Gift Set, streamlined to meet war restrictions but still retaining its characteristic beauty and utility.

JEAN NATE: Two new bath accessories, the powder and salts, both having the exquisite original Jean Naté fragrance.

PACKAGING PORTFOLIO

DERMETICS: New plastic shell-pink lipstick with its decorative motif, the trademark, gazelle, imprinted in off white.

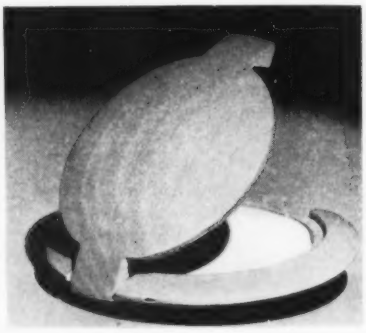
MONEAU PARFUMS: "Discovery", lingering, bewitching, in a star-cut crystal bottle with the map of the world in relief on the stopper.



SHULTON: Tissue box containing talcum and three cakes of soap. Daintily decorated box when empty may be used for tissues.

SCHIAPARELLI: Shocking Radiance, a perfumed conditioner for body, face, eyelids and lips. Dali designed the labels—a fantasy of a mermaid beautifying her body. Richard M. Krause, Inc. printed them.

CHENYU: Spring lipstick. An elastic holds cover and lipstick in place.



HENRIETTE: Large round wooden compacts in various colors and in natural. Monogram engraved on top adds elegance.

YARDLEY: Zinnia, new year-round shade of face powder. Becoming to all complexion types; gives a soft luminous quality to skin.

JACQUELINE COCHRAN: Treatment for troubled skins—Wash with mild soap at night, use medicated ointment, apply clear green lotion in morning using a cotton pad.

DAGGETT AND RAMSDELL: Super size bottle of quick lathering shampoo.

How to Protect the New and Glamorous Hands of Industry

Prevention of occupational dermatitis effected by keeping contact of irritants with the skin at a minimum . . . Protective ointments, "Invisible Gloves", etc., all reduce contact*

by LOUIS SCHWARTZ, M.D.

Medical Director, U. S. Public Health Service, and Chief, Dermatoses Investigation Section, Division of Industrial Hygiene, National Institute of Health, Bethesda, Md.

THE keynote of the prevention of occupational dermatitis is to keep contact of irritants with the skin at a minimum. Of first importance are totally enclosed processes; second, adequate local and general exhaust ventilation; third, protective clothing; fourth, enforcement of cleanliness; fifth, protective ointments; and sixth, the use of non-irritant industrial cleansers.

PROTECTIVE OINTMENTS

While protective ointments are low on the list of preventive measures, they are often the only available means of protection. In other instances they protect the skin from irritants which may escape into the air in spite of other preventive measures. Again, the face cannot be covered by protective clothing, and often the work must be carried on with bare hands, gloves being unsuited for work or impeding the speed of the operation. Moreover, workers dislike to wear gloves and seem to like to use protective ointments. When a protective ointment is used, the worker invariably removes it with soap and water immediately after work and so removes at the same time whatever irritants are on the skin. This adds considerably to the protection supposedly given by the ointment.

All protective ointments should have the following properties:

1. They should be non-irritating and non-sensitizing.
2. They should offer actual protection from the irritant.
3. They should be of such consistency that they can be applied easily.
4. They should be easily removable after work and yet stay on while the worker is exposed.

TYPES OF PROTECTIVE CREAMS

Protective applications may be divided into six classes:

1. A *simple vanishing cream* when rubbed into the skin fills the pores with soap and facilitates the removal of soil when washing after work.

Type Formula

Stearic acid	20
Sodium carbonate	2
Glycerine	6
Water	78

Melt stearic acid; dissolve sodium carbonate in water and heat to same temperature as stearic acid. Pour hot alkali solution slowly into hot stearic acid, stirring the mixture while pouring and until cold.

2. *Ointments* which leave a thin film of a resin or wax on the skin and thus prevent the irritant from touching the skin. This class can be subdivided into (a) water-soluble films, and (b) water-insoluble films. They may be in the form of ointments, emulsions or solutions. This class of protectives is sometimes called "invisible glove" type.

Women in industry. Here is shown a feminine war worker at a glass plant extracting glass in molten form at the end of her blow pipe.

The water-soluble films give some protection against solvents, such as petroleum distillates, the solvent chlorinated hydrocarbons and water-insoluble allergens, such as trinitrotoluene and tetryl. They are easily removed by water and therefore often tend to flake off as the perspiration accumulates beneath them. To counteract this action, they are sometimes mixed with fats and oils. Methyl cellulose, Irish moss, sodium silicate, karaya, quince seed, mucilage, acacia, tragacanth, casein, Elastolac (water-soluble shellac) sodium alginate and pectin are some of the water-soluble resins that may be used for this purpose.

The second type of films includes water-insoluble resins and waxes used to keep out water-soluble irritants. These resins have the disadvantage of requiring a volatile solvent in order to be applied and a special cleanser must be used for their removal. Such solvents and cleansers may defat and hence irritate the skin. Shellac and nitrocellulose are the most frequently used resins in this form of protective, and alcohol, ether and acetone are the usual solvents. When such protective films are used it is advisable to apply an emollient, such as a mixture of lanolin and cold cream to the skin after washing off the protective film. When a wax coating is applied as the invisible film, it is usually contained in a vanishing cream, and a mineral oil is used as a softening agent.

The invisible glove type of film is also a good protective against dermatitis of the face from the edges of respirators and gas masks.

Type Formula—2 (a)

Acacia	5
Tragacanth	5
Borax	2
Water	88

Dissolve borax in hot water. Powder and mix acacia and tragacanth and dissolve in solution.

*The Medical Clinics of North America, July, 1942.

Type Formula—2 (b)

Gum benzoin	5
Beeswax	2
Anhydrous lanolin	5
Ethyl alcohol	88

Melt and mix lanolin and beeswax and allow to cool. Dissolve gum benzoin in alcohol and then dissolve lanolin and beeswax mixture in the solution.

3. *Protective ointments* which cover the skin and fill the pores with a harmless fat to repel water-soluble irritants and prevent the entrance into the pores of harmful petroleum oils, greases and coal-tar derivatives. Because fat solvents must act on the film of fatty ointments before they can attack the skin, this type of protective ointment also offers some protection against solvents by buffering their action on the skin. This class of ointments is difficult to remove with soap and water. Therefore some manufacturers have added synthetic wetting agents to facilitate their removal. This class is recommended against cutting oils, greases, creosote oil, pitch, excessive sunlight and photosensitizing chemicals, especially if they contain chemical and physical light screens. They can also be used to rub into the skin after work to lubricate and soften dry skin.

Type Formula

Anhydrous lanolin	70
Castor oil	30
Perfume q.s.	

Melt lanolin and mix in the castor oil. Perfume when cool.

4. *Protective ointments* which contain a non-irritant chemical intended to detoxify the industrial irritant. For instance, a cream to protect against alkalis may contain boric or benzoic acid intended to neutralize the alkali. The addition of an animal or vegetable fat or oil to such a cream further buffers the action of the alkali by combining with it to form a soap. A protective cream against acids may contain soap and magnesium hydroxide intended to neutralize the acid.

Type Formula

Magnesium carbonate	5
Talc	5
Soap	30
Lanolin	30
Castor oil	28
Duponol	2
Perfume q.s.	

Mix soap, lanolin, and castor oil. Incorporate magnesium carbonate and Duponol.

5. *Protective ointments* which cause inert powders to adhere to the skin, forming a protective covering against skin irritants. The powders may be calamine, zinc oxide, iron oxide, kieselguhr, Bentonite and so on. The adhesive or binder may be any of the water-soluble resins used in the "invisible glove" type of cream.

Composition of Various Protective Creams

Ingredients	Class
1. Stearic acid, beeswax, lanolin, benzoic acid, glycerine, borax, potasium carbonate, mineral oil, petrolatum and glycol stearate.	Combination of Types 1, 2 and 3.
2. Stearic acid, glycerin, borax and combined potash.	Type 1.
3. Stearic acid, spermaceti, glycerin, borax, benzoic acid.	Combination of Types 1, 2 and 3.
4. Alcohol 17 per cent, gums, Irish moss, starch, spermaceti, borax, benzoic acid.	Type 2.
5. Spermaceti, paraffin, glycol stearate lanolin, castor oil, soap, borax and benzoic acid.	Combination of Types 2 and 3.
6. Castor oil, olive oil, paraffin, lanolin and glycol stearate.	Combination of Types 2 and 3.
7. Lanolin, glycerin, zinc oxide, glycol stearate, Duponol, spermaceti and benzoic acid.	Combination of Types 3 and 5.
8. Cetyl alcohol, stearyl alcohol, ceresin, castor oil, mineral oil, sodium lauryl sulfate, sodium perborate and perfume.	Combination of Types 3 and 4.
9. Castor oil, olive oil, lanolin, diglycol stearate, paraffin, titanium oxide, Duponol and menthyl salicylate.	Combination of Types 3 and 6.
10. Basic emulsion, stearic acid (vanishing cream), and vegetable gum.	Combination of Types 1 and 2.
11. Basic emulsion, stearic acid (vanishing cream), and vegetable gum plus water-soluble synthetic resin.	Combination of Types 1 and 2.
12. Lanolin, petrolatum (violet ray treated), zinc oxide and corn starch.	Combination of Types 3 and 5.
13. Lanolin, petrolatum (violet ray treated), boric acid and corn starch.	Combination of Types 3 and 4.
14. Aqueous solution of vegetable gums, sodium and potassium phosphate.	Type 2.
15. Similar to above but in cream form.	Type 2.
16. Aliphatic hydrocarbons, U.S.P. cosmetic oil, soluble cellulose, sodium alkyl sulfate, chlorthymol, methyl salicylate, glycerin, silicates and titanium dioxide.	Combination of Types 2, 5 and 6.
17. Gum arabic, Ivory soap, lanolin, perfume and water.	Combination of Types 2 and 3.
18. Stearic acid, cocoa butter, carbitol, glycerin, borax, potassium hydroxide, cetyl alcohol, perfume and water.	Combination of Types 1 and 3.
19. Calamine and film of water-repellent hydrogenated castor oil.	Combination of Types 3 and 5.
20. Stearic acid, lanolin anhydrous, borax, triethanolamine, Methocel solution, carbital, terpineol, cresol and Naccanol.	Combination of Types 1 and 2.
21. "Invisible glove" type.	Type 2.
22. Lanolin, picric acid and perfume.	Combination of Types 3 and 4.
23. Petrolatum, calamine, zinc oxide, glycerin and phenol.	Type 5.
24. Lanolin, petrolatum and balm of Gilead.	Type 3.
25. Emulsion of water in aliphatic hydrocarbon fats. Esters of alcohols of cholesterols.	Type 3.
26. Water, glycerin, vegetable fat, animal fat, vegetable oil, vegetable oil base wetting agent, bland soap, vegetable color and perfume.	Combination of protective and cleanser. Type 3.
27. Petrolatum, paraffin, soap stock oil, resin and titanium oxide.	Combination of Types 2, 3 and 5. (Waterproof protection suitable for allergens. Must be removed with very hot water and No. 26 above.
28. Natural gums, glycerin and neutral detergent.	Type 2.
29. Wax emulsion to protect against water-soluble substances.	Type 2(b).
30. Zinc hydroxide, quinine oleate, heavy emulsion of vegetable oils and lecithin.	Combination of Types 3, 4 and 6.
31. Zinc oxide, iron oxide, resin and cream base.	Type 5.
32. Water, glycerin, sodium silicate, sodium stearate (chips), gum tragacanth solution, color and Limonene.	Type 2(a).

Type Formula

Zinc oxide	5
Talc	5
Iron oxide	1
Irish moss	2
Gum benzoin	2
Water	10
Alcohol	15
Vanishing cream	60

Dissolve Irish moss in water. Dissolve benzoin in alcohol. Mix with powders and incorporate into vanishing cream.

6. *Protective applications* against the photosensitizing action of the heavy coal-tar distillates, oil distillation residues, and excessive sunlight may contain such physical light screens as menthyl salicylate, aesculin, cycloform, esculetin, menthyl benzoate, etc.

Type Formula

Lanolin	58
Castor oil	30
Titanium dioxide	5
Menthyl salicylate	5
Duponol	2
Perfume q.s.	

Melt lanolin and mix with castor oil. Incorporate titanium dioxide, menthyl salicylate and Duponol.

Most of the protective creams, emulsions and lotions on the market are combinations of these six types.

Makers of industrial protective creams were requested to give information regarding product ingredients.

Women are shown in their safety clothes doing the work that men did in pre-war period.

The formulas received in response to this request have been classified as shown on previous page.

INDUSTRIAL SKIN CLEANSERS

Personal cleanliness is one of the most important preventives of occupational dermatitis. Therefore, the use of suitable cleansers should be encouraged. In an effort to remove speedily and completely tenacious soil or dyes from the skin, workers often use harsh cleansers, such as strong abrasive soaps with high alkaline content and powerful solvents. Dermatitis resulting from this harsh treatment is of frequent occurrence, and such irritations of the skin are sometimes mistakenly attributed to the substances handled while working.

ACTION OF DETERGENTS

In order to know what detergents are best adapted for use as industrial skin cleansers, something of the chemical and physical properties by means of which detergents remove soil from the skin should be understood.

There are various theories regarding the action of soaps as cleansers. Among others, the following may be mentioned:

1. Soap solutions emulsify oils: the alkali set free when soap dissolves emulsifies the fatty material adhering to soil and enables the solution to carry away the loosened particles.

2. The alkali liberated when soap dissolves acts as a solvent for greasy matter on the surface to be cleaned.

3. By increasing surface activity, and by wetting and penetrating oily substances, the alkali loosens dirt and soil which are washed away in solution.

4. The soap acts as a lubricant and allows dirt to be rubbed off easily.

5. The hydrolysis of soap forms colloidal acid soap, which in turn forms colloidal absorption compounds with the dirt.

There are various chemicals which when added to soap increase the detergent action. Some of these aid the action of soap by increasing the free alkali content. Such are sodium carbonate, sodium silicate, sodium metasilicate, trisodium phosphate, disodium phosphate, sodium hexametaphosphate, and trisodium borate.

Some assist by increasing the wetting power and surface activity of the soap solution. Such are the synthetic wetting agents.

WETTING AGENTS

In order that dirt may be removed easily from the skin, both must be wetted by the cleanser. Wetting agents lower the surface tension of liquids, enabling them to spread over the surface and penetrate into the pores. They also act as "surface active" agents, thus enabling the solution to penetrate oily or waxy films making the dirt easily removable. The molecules of wetting agents are composed of two essential parts, one part attaches itself to the water molecule and the other part attaches itself to the oil molecule. In this manner the molecule of the wetting agent brings together the otherwise immiscible water and oil molecules. Sulfonated castor oil and the synthetic wetting agents act in this manner.

The principal synthetic wetting agents are:

1. Sodium salts of the higher alcohol sulfosuccinates.
2. The long chain of alcohol sulfates.
3. The alkyl aryl sulfonates.
4. The alkyl naphthalene sulfonates.

The principal wetting agents and detergents are listed. (See table right.)

ORGANIC SOLVENTS

Organic solvents are sometimes added to soap to increase its solvent power and aid in removing fats, oils, greases and dyes from the skin. Soaps used to remove indelible inks and dyes often contain carbon tetrachloride, naphtha, dioxane and other hydrocarbon solvents. Bentonite or any other colloidal clay which has good detergent properties in itself is sometimes added to some soaps as a filler.

INDUSTRIAL CLEANSER

The requirements of a normal industrial cleanser are as follows:

1. It should be freely soluble in hard, soft, cold or hot water.

2. It should remove fats, oils and other soil without harming the skin.

3. It should not extract from the skin its natural fats and oils.

4. It should not contain harsh abrasives or irritant scrubbers which not only will injure the skin, but may also clog the plumbing.

5. It should be handy to use if in cake form, or flow easily through soap dispensers if in granulated or powder form.

6. It should not deteriorate or become insect infested.

In order to meet these requirements, a normal industrial cleanser for general use should consist of a superfatted neutral toilet soap, containing a wetting agent or synthetic detergent, and a soft scrubber which softens or dissolves in water and does not clog the plumbing. It should contain a

Synthetic Wetting Agents and Detergents

Use	Chemical Nature
Wetting	Alky argyl sulfonate
Wetting	Sodium alkyl naphthalene sulfonate
Wetting	Sodium alkyl naphthalene sulfonate
Wetting and re-wetting	Sodium hydrocarbon sulfonate
Wetting and detergent	Sodium salt of a sulfated fatty ester
Wetting and detergent	Ammonium salt of sulfate fatty ester
Wetting	Di-octyl sodium sulfosuccinate
Wetting and detergent	Sodium alkyl aryl sulfonate
Wetting and penetrant	Alkyl naphthalene sulfonate
Wetting and detergent	Alkyl aromatic sulfonate
Detergent	Amino condensate
Detergent	Fatty acid amide alkyl sulfonate
Wetting	Alkyl aryl sulfonate
Wetting	Sodium salt of diamyl-sulfosuccinate
Wetting	Sodium salt of dimethyl-sulfosuccinate
Wetting	Sodium salt of diisopropyl-naphthalene lusfonic acid
Wetting	Sodium salt of dioctyl-sulfosuccinate
Wetting and penetrant	Lauric acid ester of diethylene glycol
Wetting and emulsifying	Long chain alcohol sulfate
Wetting and detergent	Sodium sulfate of technic oleyl alcohol
Wetting and detergent	Sodium sulfate of technical lauryl alcohol
Wetting	Condensation product of fatty acid with amino sulfonic acid ($C_{17}H_{33}$.-$CO.NCH_2.C_2H_4.SO_3Na$)

minimum of free alkali, and have a pH of 10 or less in a one per cent solution. It should contain no silica, quartz, pumice or feldspar, nor any rosin fillers or organic solvents.

Type formula for an industrial skin cleanser for general use:

Neutral toilet soap	30
Colloidal clay (Bentonite or Kieselguhr)	30
Synthetic detergent	10
Lanolin	5
Perfume	1

Mix colloidal clay and the wetting agent. Heat soap and lanolin, and mix with the above. This may be pressed into cake form, or 25 parts of corn meal may be added to make up 100 parts and the mixture then made into a powdered soap. A mixture of equal parts of potassium-coconut oil soap and sulfonated castor oil to which one per cent of a synthetic detergent is added makes a good liquid cleanser.

Soaps for industrial cleansers should be sodium or potassium salts of stearic, palmitic or oleic acids. Colloidal clay may be added because it is a harmless product which aids emulsification. In localities where the water is hard, water softeners or the synthetic wetting agents and detergents should be added to the soap. When it is necessary to remove tenacious oils or greases from the skin, the addition of ground corn meal or other soft cereal for a scrubber will aid the detergent action.

If the soil on the skin is difficult to remove without excessive scrubbing which may injure the skin, it may be necessary to add one or more of the alkali, such as trisodium phosphate, to the cleanser. When this is done, the soap should be superfatted with lanolin to buffer the action of the alkali on the skin, and then lanolin should be rubbed into the skin after the cleanser is used.

Although lathering does not necessarily add to the detergent powers of a cleanser, yet it is a property which workers desire. Coconut oil soaps lather well. Sulfonated castor oil (Turkey red oil) increases the lathering of soap. Moderate amounts of alkali, colloidal clay and perchlorethylene, when added to soap, also increase lathering.

SOAP-SENSITIVE WORKERS

Cleansers for soap- or alkali-sensitive workers can be made in solid cake form from mixtures of synthetic detergents, with colloidal clay, kieselguhr, or meerschaum. Lanolin may be added to the cleanser for emollient purposes.

Suggested Formula

Nacconol (or Santomerse, Igepon or Duponol)	20
Lanolin	3
Colloidal clay	76
Perfume	1

Mix and press into cakes of suitable size.

Such cleansers can also be had in liquid form. Suggested formula:

Neutral sulfonated castor oil	97
Pure castor oil	1
Santomerse (or other detergent)	2

HECTOGRAPH OR INDELIBLE INKS

Special cleansers are made to remove the stains of indelible inks from the skin. Such cleansers usually consist of soap, a wetting agent, added alkali and an organic solvent, such as carbon tetrachloride, naphtha or dioxane. They can be made in liquid form or in the form of a paste. In the latter form they may contain a scrubber.

Soap	30
Sulfonated castor oil	16
Synthetic detergent	20
Trisodium phosphate	4
Dioxane	20
Colloidal clay	10

The use of this paste should be followed by rubbing into the skin a mixture of lanolin and cold cream as an emollient.

A suggested cleanser paste for the removal of hectograph or indelible inks is shown in table below.

STAINS OF DYES

To remove the stains of dyes, the hands can be soaked in a 1:500 solution of potassium permanganate for five minutes, and then in a solution of sodium bisulfite 1:100 until the stain of the permanganate is removed. The hands should then be washed with a superfatted soap, dried and a mixture of lanolin and cold cream, equal parts, rubbed into the skin.

INDUSTRIAL CLEANSERS

In order to enable the physician to estimate the value of the various industrial cleansers and their suitability for use by workers with normal, oily, dry or inflamed skins, manufacturers of such cleansers were asked for the ingredients in their products. Information received is tabulated below. From this table an industrial physician or safety director can intelligently choose the cleanser best suited to the needs of the workers under his care.

Composition of Various Industrial Skin Cleaners

Manufacturer	Name of Cleanser	Ingredients	Remarks
Lightfoot-Schultz Co.	La Grace	Vegetable oil soaps, synthetic wetting agent, sulfonated oils and vegetable scrubber	Good powdered soap cleanser
C. B. Dolge Co.	Handeez	Toilet soap, sodium metaphosphate and cornmeal	Alkaline powdered soap
G. H. Packwood Co.	Pax Heavy Duty Cleanser	Anhydrous soap, lanolin, castor oil, tetra-sodium pyrophosphate, metaphosphate and cornmeal	Superfatted alkaline powdered cleanser
G. H. Packwood Co.	Pax Hyspeed Cleanser	Anhydrous soap, alkaline salts and vegetable meals	Alkaline powdered cleanser
G. H. Packwood Co.	Pax Light Duty Cleanser	Anhydrous soap and bland oils	Superfatted soap
G. H. Packwood Co.	Pax Officesoap	Anhydrous soap	
Dermal Products	Dermalav	Sulfated hydrogenated castor oil, diethylene glycol, monostearate and white petrolatum	Soapless cleanser in cases of dermatitis
H. Kirk White & Co.	Miner's Special Liquid Soap	Coconut oil soft soap, methyl cellulose, sulfonated castor oil and oils of citronella and sassafras	Good liquid cleaner
H. Kirk White & Co.	So White Hand Cleanser	Soap powder, sodium carbonate, trisodium phosphate, bicarbonate of sodium, sodium bisulfite, chit of wheat and corn, germ of wheat and corn and oils of citronella and sassafras	Strong cleanser; alkaline; powdered
Standard Mailing Machines Co.	Standard Cleansing Cream	Stearic acid cream, soap, oil and organic solvent	Cream to remove hectograph ink
Sugar Beet Products Co.	SBS-11 Industrial Skin Cleanser	Wetting agent, tetra-sodium pyrophosphate, olive oil soap, palm oil soap, pine oil soap, sodium sesqui carbonate, trisodium phosphate, pine oil treated cornmeal and bentonite	Strong cleanser; alkaline; powdered
West Disinfecting Co.	Lan O Kleen	Sodium soap, lanolin, borax, trisodium phosphate, cornmeal	A superfatted alkaline powdered cleanser
West Disinfecting Co.	Sulpho Hand Cleaner	Sulfonated castor oil, wetting agent and detergent trisodium phosphate	A good soapless cleanser for the removal of oils and greases; may be used for dry skins and dermatitis
Pacific Coast Borax Co.	Boraxo	Anhydrous soap and borax	A mild alkaline powdered cleanser

Flavors

Substitutes Evidence Flavor Industry's Ingenuity

Substitutes for critical raw materials and intermediates give civilians the flavors they are most used to . . . An example of an essential industry rising to the war emergency.

By DR. ALEXANDER E. KATZ

Vice-President and Chief Chemist, Florasynth Laboratories, Inc., Hollywood, Calif.

A LITTLE over a year ago, at the annual meeting of the Western Confectioners' Association, I delivered a paper on "Natural and Synthetic Flavoring Materials and Aromatic Chemicals During the War Emergency." My slogan at that time was "Don't stop the research for substitutes—if you have substitutes available, try to keep ahead of the trend in research to produce substitutes for available substitutes."

From the first day of the United States' entry into the war, we in the industry began to feel the shortages of some critical raw materials. We immediately began to do some important research for substitution of materials which became critical.

As flavoring materials are used in foods served to the armed forces, supplied to our allies and used at home to keep up the civilian morale, it is necessary to select materials which do not interfere with the war efforts. As soon as a direct raw material or intermediate becomes critical, it is important to have a practical and suitable substitute. This substitute must possess the same taste and aroma, must be easily produced from available raw materials not used in war industries and must be economically produced in order not to interfere with the price ceiling of the finished merchandise, and, above all, the product must be non-toxic in compliance with regulations of Food, Drug and Cosmetic Laws.

As vanilla is the most popular flavor in the ice cream, baking and chocolate industries, and in view of the fact that the importation of vanilla beans from Madagascar was stopped in the beginning of the war, a lot of substitutes were introduced to augment the amount of vanilla beans in stock in the U. S.

Vanillin naturally is not a new item. This was first produced in 1874 by Tiemann through process of oxidation with chromic acid of the glucoside, coniferin, which occurs in the cambium of various coniferous woods.

SOURCES OF VANILLA SUBSTITUTES

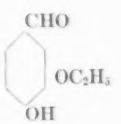
Later, vanillin was produced from eugenol, which occurs in oil of cloves. Other materials were used as a base to produce this important aromatic chemical; namely, guaiacol ortho-anisidine.

Vanillin can also be produced from heliotropine which in turn is made from safrol. The latter can be made from oil of sassafras which is a distillate of sassafras bark. Sassafras trees are grown in large quantities in the United States in North and South Carolina and in Kentucky. To make the United States independent of the importation of such materials as clove oil, vanillin recently was produced in the United States by using wood pulp, practically reverting to the old Tiemann process in using lignin as a base.

In Germany, due to the shortage of materials for the production of vanillin, wood pulp has been used to make vanillin for many years. Many other materials are also made from wood pulp, such as proteins, sugar and even ethyl alcohol, reconstructing same from methyl alcohol which is a wood derivative.

ETHYL VANILLAN GROWING POPULAR

Another material which is rapidly gaining popularity in the field of flavors is ethyl vanillin which is approximately three times stronger than methyl vanillin. This material can be produced from many sources. One of the sources that is not as critical as others is safrol which, as stated above, is obtained from oil of sassafras. Ethyl vanillin is chemically known as ethyl protocatechuic aldehyde, having a structural formula:



It is, therefore, metaethoxy-paraoxy-benzaldehyde. Molecular weight 166; congealing point 76 to 77 deg. C; melting point 77 to 78 deg. C. Ethyl vanillin is a homologue of vanillin, wherein the meta-methoxy

group has been replaced by a meta-ethoxy group. While both ethyl vanillin and methyl vanillin possess the characteristic odor and taste of vanilla beans, the ethyl vanillin possesses a superior and stronger, also more delicate flavor. It comes nearest to the peculiar aroma of natural Bourvon vanilla beans.

In view of the fact that it is important in this emergency to use the strongest materials possible to obtain results, ethyl vanillin is gradually being used in larger quantities, as it is more economical in use and transportation which is quite an important item at the present time. Being a much stronger product, it is being used in cooperation with the governmental requests to condense our shipments.

Still another material in this line is vanillic acid ester of vanilla alcohol. This is produced from vanillin by modifying the well known Claisen reaction by which aromatic aldehydes are changed to alcohol esters by means of sodium salt of the corresponding aromatic alcohol. A well known instance is the condensation of two molecules of benzaldehyde to one molecule of benzyl benzoate, using sodium benzylate as a catalyst. The suggestion is given here to produce this ester because, as a flavor, the ester is at least twice as strong as vanillin. The yield obtained is practically 85 per cent of vanillin used. Therefore, there is a definite gain in using this product.

TRANSPORTATION SPACE AN ITEM

As there is a shortage during the emergency of containers, closures, shipping cartons, cases, etc., it is important for the manufacturer of flavors to produce the strongest possible material in order to save on these items and besides, save transportation space which is vital. Therefore, flavoring materials, whether they are natural or synthetic, should be produced and used in their greatest concentration. Instead of shipping weak hydro-alcoholic solution of vanillin and coumarin, the armed forces of the United States are using compressed vanilla flavor in tablet form, consisting of lactose 72.98 per cent, cornstarch 10 per cent, vanillin 14.90 per cent, coumarin 2.12 per cent. Ethyl vanillin can be used instead of vanillin in this mixture, naturally using one-third of the amount of vanillin indicated, in which case the following is recommended: lactose 82.87 per cent, cornstarch 10 per cent, ethyl vanillin 5.02 per cent, coumarin 2.12 per cent. The tablets weigh from 5 to 5¼ grains each.

In extracts where a mixture of 5 to 10 per cent of esters, aldehydes, ketones and essential oils are incorporated, it is recommended to use 100 per cent of each aromatic mixture in order to save on shipments of inert materials, such as alcohol and water. Alcohol is a necessary war material and it should either be eliminated or replaced with less critical solvents. Under the Food and Drug Regulations propylene glycol can be used as a solvent for flavoring materials.

Propylene glycol is also a good substitute for glycerine and possesses a much stronger solvent power. The latter is also used in large quantities in the flavoring industry and, as it is essential for use in war products, it can practically be eliminated as a solvent.

INGENUITY SHOWN IN SUBSTITUTES

The following products are successfully produced to substitute shortage of materials which are impossible to obtain due to the war conditions:

Anise oil, which was always a product of importation from the Orient, is synthetically produced in the form of anethol which answers all of the specifications of anethol derived from oil of anise.

Allspice oil: This product is reproduced synthetically from eugenol and sesqui terpenes. Eugenol is a derivative of oil of cloves and many other products, such as oil of bay.

Angelica root and *angelica seed* are reproduced synthetically from phellandrene, valeric acid and its esters. Phellandrene is a derivative of oil of eucalyptus.

Oil of sweet basil: This used to be imported from Europe and Reunion Islands. The substitute is now being reproduced by using methyl chavicol, linalool and cineol. Linalool is a derivative of Mexican linalool wood oil, or from Brazilian oil of Bois de Rose. In the Soviet Union it is produced from coriander oil. Cineol is a derivative of eucalyptus oil.

Bergamot oil: This product has always been a product of importation into the United States. Large quantities were used in the perfumery and cosmetic industries and only very small quantities were employed in the making of flavors. At the present time bergamot oil is entirely substituted by a synthetic product made from linalyl acetate, methyl anthranilate and lemonene, which is a by-product in making terpenless lemon or orange oils.

Oil of bitter almond, which was usually imported from France, is reproduced by a well-known constituent benzaldehyde. Benzaldehyde is produced in the United States on a large scale. There is some shortage at present due to critical conditions in obtaining toluene and benzol from which it also can be made. However, small quantities are being released by manufacturers.

Cananga and *ylang ylang oils* are used mostly in perfumery and in minute quantities in the liquor industry. This can be reproduced with apiol, linolool, geraniol and citronellol and their esters, also by using pinene and para-cresyl-methyl-ether.

Caraway oil: This is reproduced with carvone, derived from dill weed oil. Carvone is a constituent of caraway and dill weed oils.

Cardomon oil: This is reproduced from terpinene, dipentene and acetic acid esters of linolool and other alcohols, such as borneol and terpineol.

Cassia and *cinnamon oils* were always imported from the Orient and Ceylon. Satisfactory substitutes are made from cinnamic aldehyde and small amounts of esters of cinnamic alcohol.

Citronella oil, which is used mostly as a mosquito repellent, is reproduced by using citronellal and hydrocarbons derived from citronella oil. These are by-products in making geraniol from citronella and have practically the same qualities as an insect repellent as citronella oil itself. Methyl eugenol to the extent of 1 per cent can also be added. This substitute is also usable for perfuming soap and can be used as a deodorant in many technical products.

Coriander oil: This is reproduced synthetically by using linalool derived from Mexican linaloe or rosewood oils, also by the addition of small amounts of pinene and cymol.

Dill weed oil, which was always a product of importation from Holland, is now successfully produced from dill weeds cultivated in the states of Oregon and Washington.

Geranium oil, which was a product of importation from Algiers and Reunion Islands, is reproduced from geraniol and citronellol and their esters, diphenyl matane and diphenyl oxide. The latter two products are not constituents of geranium. However, they definitely possess a geranium odor. Phenyl ethyl alcohol and its esters are also valuable in the reproduction of geranium.

Lavender oil usually came from France, Spain and small quantities from England. This product is reproduced from linollyl acetate, which is one of the constituents of lavender oil. Coumarin, geraniol and its esters are very useful in the reproduction of lavender.

There are plenty of citrus oils in the United States so there is no necessity of reproducing such oils. However, lemon oil, in a case of necessity, can be reproduced with citral, dextro lemonene, geranyl acetate,

decyl aldehyde and methyl anthranilate.

Orange oil is in abundance in the United States. The oil is produced in California, Florida and Texas. However, it can be reproduced by using citral, decyl aldehyde, nonyl aldehyde, methyl anthranilate or ethyl anthranilate and lemonene. Traces of indol will make a product similar to mandarine oil.

Other materials were recently synthetized successfully, such as *mace, nutmeg, black pepper, dalmatian sage oils* and many others. These are reproduced by studying their aromatic constituents and reproducing them synthetically.

Artificial mustard oil, which is chemically known as allyl isothiocyanate, is entirely substituting the natural mustard oil which originally is produced from mustard seeds, a product of importation.

Another product which is definitely synthetized is *wintergreen oil*. In this case, methyl salicylate is used. The latter is a constituent of wintergreen oil.

SUBSTITUTES FOR CITRIC ACID

During this emergency there is a definite shortage in the food industry of acidulents which are so important for producing the proper fruit taste in the finished products. Before the war citric acid was used for this purpose. In California, citric acid was produced from lemons; in Hawaii, from pineapples; and in New York, from sugar by fermentation process. With the large numbers of lend-lease shipments, also with requisitions from the Government for our armed forces, citric acid is practically unobtainable for civilian use.

Some tartaric acid is being produced in California from by-products of the wine industry. However, there isn't a sufficient amount of tartaric acid being made to satisfy the industry and besides that, the cost of tartaric acid is over three and one-half times the cost of citric acid.

GOV'T DEMANDS FOR H_3PO_4

Phosphoric acid is produced in the United States in large quantities. This material is used to a great extent in the beverage and other food industries where liquid products can be used without interference. Lately, however, due to the necessity of ever-increasing use of phosphates for war efforts, the material for civilian use is practically off the market. Phosphoric acid is used by the Government to rust-proof guns, planes, tanks, ships, etc.; in fact, practically all exposed metal or steel parts.

Another material which has been used as an acidulent in the U. S. A. is lactic acid. However, if the material is not sufficiently purified, it carries somewhat of a "cheesy" taste. The newest development in the line of acidulents is saccharic acid (d) which has been introduced on the market in 40 per cent strength. This is produced from dextrose. The objectionable part of this material is that on standing it darkens in color. However, the amount usually required for acidulation in beverages will not interfere with the color of the finished product.

Although the saccharic acid is more expensive than citric or phosphoric acids, it should be considered as an important development during this emergency. The pH value of 1 c.c. of saccharic acid 40 per cent is 2.25; that of tartaric is 2.30 and of citric 2.70. Saccharic acid can be used as a substitute for above-mentioned acids. However, in places such as powdered gelatin desserts which are prepared in powdered form, liquid products such as saccharic or phosphoric acids cannot be used.

Labeling Imitation Flavors

During the past several years there has been a tendency for extract and flavor manufacturers—some of whom are members of our Association—to adopt fanciful names in the marketing of their imitation extracts and/or flavors. The labeling commonly adopted for said products gives great prominence to the fanciful or brand name, and in small type sets forth that the product is an "imitation" extract or flavor; then immediately thereunder there is listed ingredients contained therein.

Under date of January 19, 1943, the Federal Trade Commission, after due deliberation, held that one Arthur Ferber, individually, and trading as The Ferbo Co., was guilty of violating the Federal Trade Commission Act in the advertising, sale and distribution of a food flavoring product designated as "French Tang Vanilla Flavor" and as "Sun-Cu-Nilla."

Respondent Ferber was therefore ordered to forthwith cease and desist from directly or indirectly—(1) Disseminating or causing to be disseminated any advertisement by means of the United States mails, or by any means in commerce, as "commerce" is defined in the Federal Trade Commission Act, which advertisement (a) uses the term "vanilla," "vanilla flavor," or "vanilla flavoring," or any other term of similar import, to designate or describe respondent's product, unless such term is immediately preceded by the word "imitation" in equally conspicuous type; or (b) represents in any manner or by any means that respondent's product is genuine vanilla extract or flavoring. (2) Disseminating or causing to be disseminated any advertisement by any means for the purpose of inducing or which is likely to induce, directly or indirectly, the purchase in commerce, as "commerce" is defined in the Federal Trade Commission Act, of respondent's product, which advertisement contains any representation prohibited in said cease and desist order.

It is my opinion, under this decision, that flavoring and extract manufacturers producing, selling or offering for sale imitation extracts and/or flavors cannot by advertisement or on the labeling thereof indicate that said imitation extract or flavor is better than the pure extract or flavor; that the greatest prominence in advertising and labeling of said product must center around the fact that said article is an imitation extract or flavor and not upon any adopted distinctive or trade name.

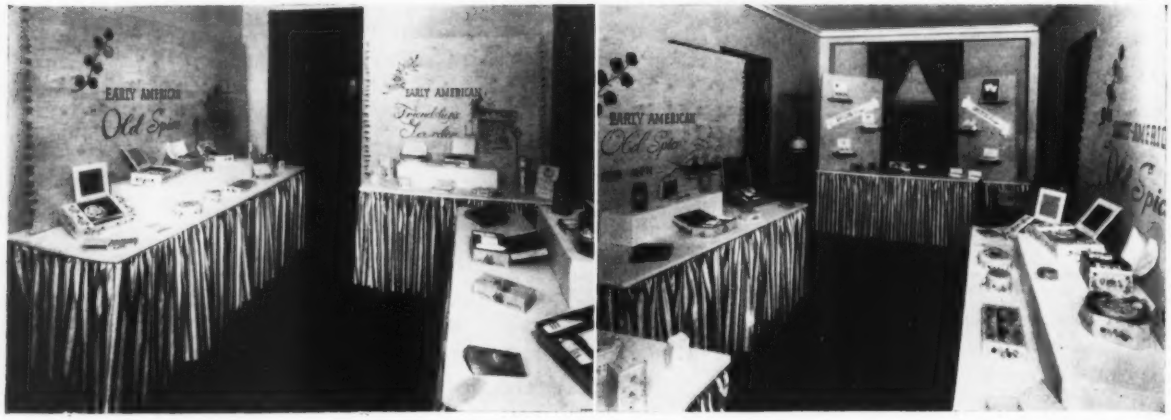
It will be well worth while for manufacturers to check their labels to insure that the labeling or advertising of an imitation extract or flavor comes within the Federal Trade Commission Act, as likewise the Federal Food, Drug and Cosmetic Act of 1938 as amended and regulations promulgated thereunder by the Food and Drug Administration of the Federal Security Agency.—*John S. Hall.*

Syrup Substitutes

Sugar shortages have made British investigators (*Chemist & Druggist 133:318, 1940*) seek syrup substitutes for use as vehicles for various medicinal substances. Solutions of various gums have been studied and among them were the following two glycerine-containing mucilages which have retained their stability for four months or more at the time the report was written:

I. Gum tragacanth	2 parts
Glycerine	a sufficient quantity
Water, q.s. to make	100 parts
II. Karaya gum	1 part
Glycerine	a sufficient quantity
Water, q.s. to make	100 parts

In both these preparations, saccharin (0.1 per cent) was used as a sweetening agent and methyl para-hydroxybenzoate (0.1 per cent) as a preservative. The glycerine, it was stated, increases miscibility and forms a cream. In making these syrup substitutes, the mucilages should be brought to the boiling point, allowed to simmer for a half hour and then filtered through flannel.



These two rooms, showing the products of Shulton, Inc., typify the resourcefulness in arranging attractive and enticing displays.

Boost Sales at the Toiletries Show

THE IDEA of toiletries shows conceived some eight to ten years ago has always been a very popular method of presenting new Fall products to the various sections all over the country.

Due to the reduced transportation facilities it has been next to impossible for salesmen to do a complete job in covering the territory by individual calls, and it has been equally difficult for buyers to visit the New York market. For these reasons it can readily be understood how indispensable these local shows have been this war-time year.

These shows are usually local exhibits sponsored by the Chamber of Commerce, some club or civic organization.

THE VARIOUS SHOWS

The Northwest started the round of exhibits with one at the Olympic Hotel in Seattle, Wash., from June 18th to 28th; one in Spokane, on June 30th to July 6th at the Davenport Hotel, and the third at Portland, Ore., on July 23rd to August 2nd at the Portland Hotel. All three were voted a 100 per cent success.

On July 5th through July 9th, the Dallas show at the Baker Hotel under the sponsorship of the Cosmesis Club, occupied two entire sample room floors with exhibits; exhibitors included the best known manufacturers of all types of cosmetic and toiletries.

Pittsburgh, on July 11th and 12th, held its display—the 1943 show of the Pittsburgh Toilet Goods Association—at the William Penn Hotel. This was one of the most interesting as well as the largest attended ever held in this section.

In Los Angeles, on July 12th through 16th, California initiated its first toiletries show at the Hotel Biltmore. This was the first of its kind to be held in the southwest and drew crowds of more than 20,000. More than 30 exhibitors, representing 50 lines, took part and buyers from firms of 11 western states, Alaska and Hawaii were present.

Bert Butterworth, West Coast Druggist, was committee chairman, and Harold W. Wright, show manager. Members of the committee included: Donald S. Cowling, Parfumerie De Raymond; Harold H. Boulware, Frances Denney; Howard P. Gilbert, Lesquendieu; A. P. Clapp, Lamont Corliss; H. B. Fisher, M. C. Currie Associates; B. L. Heggen, Luxor, Ltd.; Geo. H. Voelker, Harriet Hubbard Ayer, Inc.; W. B. Webb, Guy Banta Organization; Larry Heiner, Lucien Lelong; Walter Kohl, Wrisley Co., and Sanford Wendell, Sanford Wendell Co. The show was sponsored by the Domestic Trade Department of the Los Angeles Chamber of Commerce.

In Boston, the exhibit, held the week of July 10th at the Parker House, boasted practically all of the large toilet goods manufacturers being present.

Above is a typical exhibit showing two of the three rooms decorated with displays by Shulton, Inc. Others included Houbigants, Rubinstein, Richard Hudnut, Bourjois, and many others.

One of the largest in attendance and also in the number of displays was the Chicago show, which was managed by the Chicago Associated Toiletries Salesmen, better known as the CATS. This was held at the Palmer House, July 12th to 17th. About 70 toilet goods manufacturers availed themselves of this means of presenting their Christmas packages as well as regular items. One feature—and always an enjoyable one—was the cocktail party held on the eve of the opening.

In spite of the restrictions on the various materials, sizes of boxes, and containers, the exhibits afforded a large choice, though the absence of many items and packages made buyers realize more fully the extent manufacturers are handicapped in supplying the needs of the trade, and that tolerance and patience is needed on both sizes in these difficult times.

Meeting the Post-War Market Period

IT is none too soon for merchants to begin their post-war planning, both for the well-being of the country as a whole when the fighting ceases and for the maintenance of their competitive standing in their own communities

According to *The New York Times* "the position of the merchant in the post-war world is what he will make it. Much has been heard in recent years that distribution has come of age, but, excellent as has been the war record of retailers, the post-war period will be one to test the measure to which they will meet both opportunities and obligations. The manufacturer who supplies his needs must do his share in cooperation.

"In some respects the post-war outlook for merchants is better than that which featured the period following the last war. It appears there will be no top-heavy inventories at highly inflated prices to liquidate. Consumer demand, dammed up by war-time restrictions but backed by billions in purchasing power, threatens for a while at least to exceed supplies by a wide margin. This is the period when the much talked of "inflationary gap" may actually get into operation.

"However, the retailer's post-war job is far from one of catering to a temporary demand, no matter how large it may prove at the outset. The retailer should begin now to shape ways and means of doing both in his local community.

Basic Principles in Manufacture of Emulsion Flavors

The second in a series of a republication of the fundamental investigation at Mellon Institute in 1920 instigated by the scarcity of alcohol and other solvents

by MELVIN DEGROOTE

EVERY one is familiar with a certain class of substances known as crystals. The various properties of crystals have been subjected to careful study by scientists. One may take ordinary crystals of table salt as an example. Salt will dissolve in water. The appearance of the water is just as before—no turbidity, not anything to suggest the presence of salt—and even the use of powerful illuminating and magnifying appliances does not reveal the salt. Chemists explain this as being a case of molecular or ionic dispersion or distribution. Likewise, there are other properties that crystals are known to possess. It is known that, if a salt solution is sufficiently evaporated, crystals will again appear and have certain definite forms, just as snow crystals are always hexagonal. Likewise, when a housewife adds salt crystals to water in which potatoes are to be boiled the boiling-point of the water is increased slightly. The ice cream maker adds salt to chipped ice in order that the freezing point of the ice or brine may be lowered. It may be noted in this connection that the salt has not materially increased the viscosity of the water.

COLLOIDS

It may be interesting to consider a paint pigment, such as white lead, if ordinary coarse white lead is mixed with linseed oil, the lead eventually settles on the bottom. If the lead is ground in a mill for a week and the process is repeated, it will remain in suspension longer, but will ultimately settle. If it is ground for a very long period, it may stay in suspension for a year. However long it may stay in suspension, one can always see the little lead particles under the microscope. Such ground lead would feel impalpable to the sense of touch. The question now arises, is there a state of fineness—or sub-division—that lies in between the two that have been described, and how do the substances behave? The answer is positive and these particular substances are known as "colloids."

Many of the interesting properties exhibited by colloids are connected directly with what is termed surface tension. It is known that any liquid will, if possible, occupy such a shape as to have the smallest possible surface. A drop of oil freed in water, becomes a sphere. Likewise two drops of mercury, if permitted to come in contact, become one large sphere, because the surface exposed is less than in the case of the two separate ones. In the same way, as there is an attraction between two particles of the same substance, likewise there may be an attraction between the surfaces of different materials.

If a colloidal substance, such as glue or gelatine or a gum is dissolved, it breaks up into an exceedingly large number of small particles. Since the surface tension or energy is, at least in many cases, proportional to the surface exposed, so one may expect certain properties by this liberation of energy or surface power that was not previously possible. Indeed, in the laboratory of the colloid chemist, one may find ordinary black carbon in permanent suspension, or even common sand or silicon dioxide floating in water and never settling, and possibly a metal —for instance, gold, real metallic gold, just as is found in jewelry—may be floating in suspension due to this wonderful surface phenomenon.

NATURE OF AN EMULSION

It has been previously stated that emulsions are a small class in the field of colloids. An emulsion has been defined above as a certain mixture of two immiscible liquids in each other. It may now be said that an emulsion must have a dispersed phase, a dispersing phase, and usually an emulsifying colloid. By dispersed phase is meant that particular liquid which is sub-divided and distributed throughout the body of the emulsion, as oil of lemon, oil of orange or cod liver oil. By dispersing phase is meant the one that separates the small droplets of the dispersed phase and is usually an aqueous solution. It is possible to form an emulsion without the presence of a colloid, but this is rather rare.

An oil and water emulsion may be an oil-in-water emulsion or a water-in-oil emulsion. The oil may be the dispersed phase and the water the dispersing phase, or the reverse may be true. Milk, cod liver oil emulsions, salad dressings, and essential oil flavors may be taken as examples of the first class. Butter, lanolin, dry cleaning soaps, some lubricating greases and some mixed paints illustrate the water-in-oil type.

OIL-IN-WATER EMULSION

The oil-in-water emulsion is the only one that need be considered in detail in this article. The three classes of this type are those where the emulsifying agent is a water-soluble colloid or where it is an insoluble or slightly soluble colloid or where the emulsion is due to an electric charge. The first one is of prime importance. Very little work has been completed in regard to the insoluble colloids in food products. Emulsions due to an electric charge are limited to a few tenths of a per cent of oil in water.

The list of water-soluble colloids that may be used as emulsifying agents is large, but from a hygienic standpoint it may be narrowed down to a rather small number. Various vegetable gums have been favorites with many manufacturers, starches, dextrins, and treated starches of different kinds have been suggested and used in some preparations. Gelatinous material, such as gelatine, agar-agar, Irish moss, and Iceland moss are valuable for some purposes. Albumen derived from blood,

eggs, or milk is an excellent emulsifying agent. The properties of casein have long been recognized. The emulsifying action of soaps and similar bodies, as saponin and quillaia extract —although widely different from soap in chemical composition—are frequently employed for technical purposes.

CAUSE OF PERMANENCY

It has been shown that the permanency of an emulsion is due to the presence of a colloid. The action of the colloid is closely related with its surface. Certain energy of force or attraction is exerted by the colloidal surface upon substances in which it is in contact. This same force disappears in the solution of a salt—that is, a state where the particles are much smaller—and likewise is absent from ordinarily finely ground products that are coarser than the colloid. When a colloid dissolves in water, it breaks up into a large number of small particles, comparable to grinding in an exceedingly efficient mill for a long period of time. It may now be pertinent to consider if, with this knowledge in mind, one can predict whether or not a certain colloid will form a permanent emulsion in a certain specific case. The answer is that such data would only give part of the information desired, because, just as this force is tending to stabilize the emulsion, likewise certain other forces are tending to break it apart.

SATISFACTORY EMULSIFYING AGENT

The practical considerations are as important as the chemical ones. It is obvious that the emulsifying agent must not be objectionable from a food standpoint. Some varieties of saponin extracts have excellent emulsifying properties, yet they might be objectionable, due to their action on the red corpuscles in the blood. Ordinary edible egg albumen is valuable in increasing the permanency of an emulsion, yet in time it may develop a mal-odor, or at least tend to mask the more delicate odor of the aromatic principle. Powdered milk is excellent as an addition agent in certain emulsions, but may increase the tendency to cause the growth of various micro-organisms. Indeed, a substance such as starch may be satisfactory as a food, yet it may impart a raw taste to the emulsion that is undesirable. Gelatines and similar vegetable materials at times require exacting manipulation to obtain suitable results. Freedom from these various objections may partially explain why such gums as tragacanth and acacia are favorites.

Gum tragacanth is a gummy exudate from a species of *Astragalus gummifer* and is native to various parts of Asia Minor, Syria, Armenia, Kurdistan, and Persia. One part of the gum dissolves in—or rather swells up with about fifty or sixty parts of water. This solution may be filtered and leave a slimy residue behind. The entire gum dissolves in an alkaline solution and in hydrogen dioxide. The gum is insoluble in ethyl alcohol. In addition to its use as an emulsifying agent, it is largely employed in the manufacture of adhesives, calico printing and leather dressing.

Gum acacia or gum arabic is derived from numerous species of the acacia family, especially *Acacia Senegal*. It is a gummy exudation from the stems and the branches. This gum is largely a form of arabic acid combined with calcium and perhaps magnesium and potassium. It is soluble in water, but insoluble in ethyl alcohol. It is used in pharmacy, adhesives, inks, textile printing and confectionery. Gum karaya is another vegetable gum that is largely used in edible products, but its application in emulsions is somewhat limited.

STARCHES

Starches are rather difficult to manipulate. They are derived from corn, wheat, rice, potatoes, and cassava or arrow-root. The technical applications of starches are found in laundering, textile finishing, explosives, face powders and medicine. Dextrines are prepared from starches by the action of heat or other methods. Dextrine is also known as British Gum, starch gum, artificial gum and vegetable gum. Dextrines are much more readily soluble in water—especially in cold water—than starch. They find application in various industries, especially in the manufacture of confectionery and adhesives. There are also various kinds of treated and soluble starches and dextrines. The treatment is varied in each case so as to produce a starch in which some particular properties are developed to the utmost. It is interesting to note that on the addition of water, even when warm, the starch granules may swell to the point where they are many times as large as originally, yet retain their form intact. Proper boiling does break the starch granule, but under usual conditions this does not happen in an emulsion.

ALBUMENS

Albumens may be defined as water-soluble proteins that are coagulatable by heat. Albumen comes on the market in both edible and technical forms. The albumen may be derived from blood or the whites of eggs. Milk contains a body known as casein. Casein, like albumen, is a protein—that is, a compound of carbon, hydrogen, nitrogen, oxygen, and sulfur—but the alkaline solution is not coagulated by heat. Commercial casein is of considerable industrial importance. Powdered milk contains casein and a small proportion of milk albumen. Commercial casein, as such, finds use in adhesives, leather finishing, paper sizing, water paints and celluloid substitutes, is relatively cheap, but often has an offensive odor. For food flavors, it may be more convenient to employ concentrated milk or powdered milk. The additional milk albumen is desirable since it is an efficient colloid.

DIFFICULTY WITH GELATINES

Gelatines are difficult to employ in emulsions. It is usually necessary to make the emulsions at a higher temperature, and cool after the emulsion is complete. This allows a considerable increase in viscosity, which aids to stabilize the emulsion. Various vegetable materials, such as agar-agar, Iceland moss and Irish moss, are sometimes used in pharmaceutical preparations.

The addition of a small amount of saponin to a gum emulsion has a marked action on the emulsion structure. This point will be referred to again.

SUGAR SOLUTIONS

Such viscous bodies as sugar solutions or glycerine are not considered as colloids. However, they do exhibit the surface attraction previously mentioned and may be considered as emulsifying agents, and they are often of value when used in combination with some gum or other agent. Fischer and Hooker have commented on the fact that such materials do show a certain degree of colloidality.

Artificial Color Limited

A recent decision handed down by the Superior Court in Pennsylvania upheld the Bureau of Foods and Chemistry of the State Department of Agriculture in their contention that under definitions and standards established for non-alcoholic and still drinks, artificial color cannot be used in orangeade or any soft drink that tends to imitate the color of the orange.

It was alleged that during the trial of a case, the artificial color gave the soft drink the appearance of orange juice and therefore damage and inferiority was concealed. The Food and Drug Act of the State of Pennsylvania permits color in foods but prohibits the use of coloring matter to conceal inferiority of food or to make the food appear of better quality, such as in orange juice, etc.

The MASTER CREATES

SLOWLY at times—again, incredibly swift, the master's fingers fly over the keyboard and tiny black and white notes cover the page. As the notes blend together, immortal music fills the air—music that will live in men's hearts forever. And the blending of musical notes is very like the blending of perfumes, for as the notes must follow each other in perfect order, so the right ingredients in just the right proportions bring forth the delicate fragrance of the flower. In this tradition, we are proud to offer our Gardenia Supreme, a truly remarkable reproduction of the natural flower fragrance. Samples are available for use in your perfumes, colognes, creams and powders.

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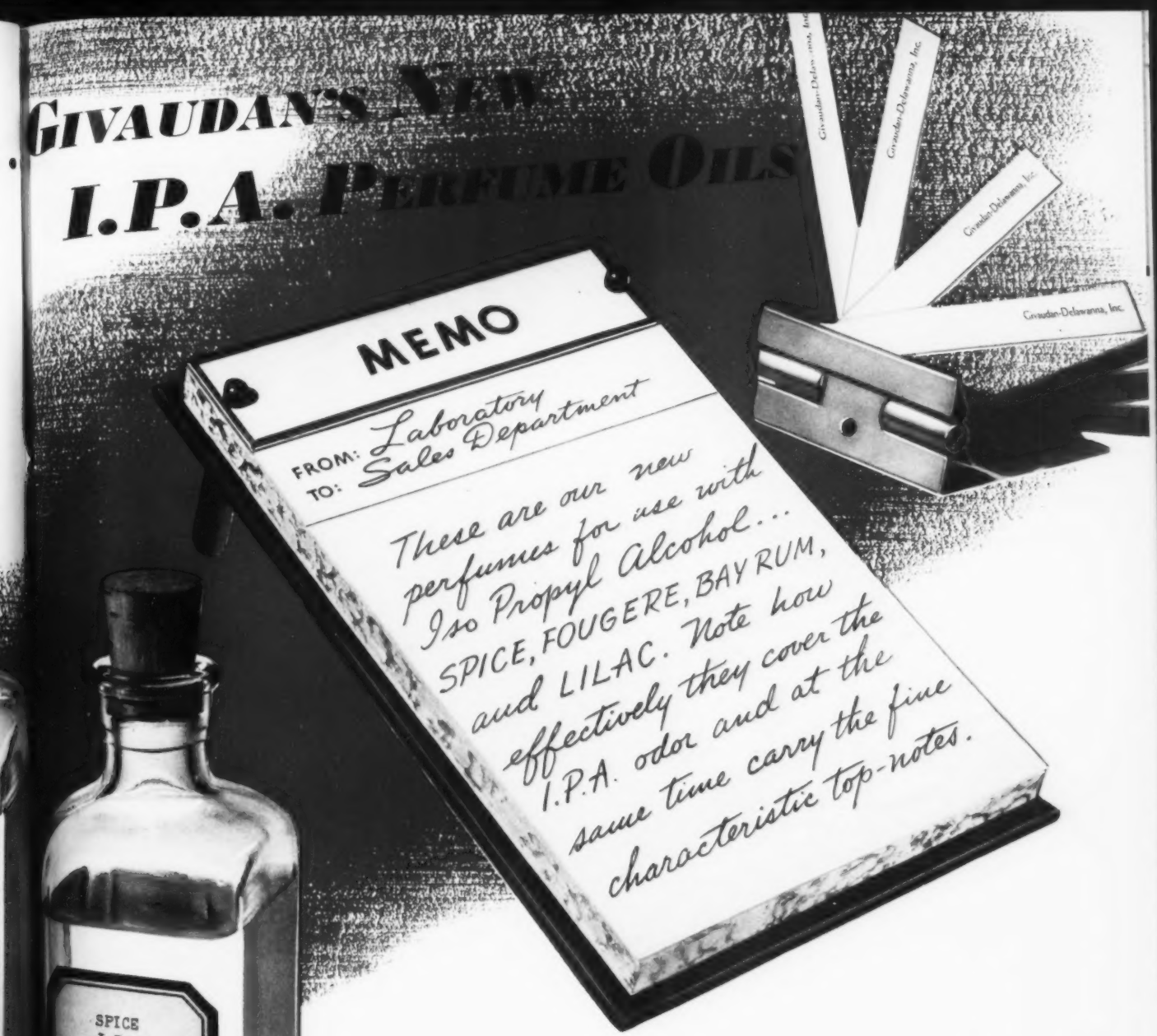
Atlanta • Chicago • Dallas • Memphis • Pittsburgh

TIMELY AND EFFECTIVE..

GIVAUDAN'S NEW I.P.A. PERFUME OILS


MEMO
FROM: Laboratory
TO: Sales Department
These are our new perfumes for use with Iso Propyl Alcohol... SPICE, FOUGERE, BAY RUM, and LILAC. Note how effectively they cover the I.P.A. odor and at the same time carry the fine characteristic top-notes.
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SPICE
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To meet the pressing need for perfume compounds which both *deodorize* and *re-odorize* Iso Propyl Alcohol compositions, Givaudan offers these new, special-purpose perfume oils.

We are confident that your trials of these oils will prove their efficiency...first, in deodorizing the I. P. A. odor...secondly, in providing the quality perfume character essential to your product's success.

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OUR PLANT FACILITIES ARE AVAILABLE FOR ANY FURTHER CONTRIBUTION WE MAY MAKE TO PRODUCTION OF MATERIALS FOR THE WAR EFFORT.

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METHOCEL

- **Controls body and viscosity**
- **Prevents settling of solids**
- **Stabilizes emulsions**
- **Uniform—Inert—Neutral**

METHOCEL is in demand as a binding agent for lipsticks, shaving cream sticks and toothpastes. Its exceptional binding power, in combination with numerous other helpful qualities, gives it wide acceptance in the drug and cosmetic field. It is extensively used to prevent "creaming" of emulsions and the settling of dispersed solids; also as a gel carrier for unguents and medicants.

METHOCEL is completely inert and neutral. It is free of all odor and taste, possesses an unusual tolerance of alcohol and is compatible with a wide range of materials. Your inquiries regarding this distinctive and useful Dow product are invited.

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CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

Soap

British Soap Makers Fight to Preserve Their Brand Names

Although the usual selling methods of the British Soap Manufacturers are war casualties their resourcefulness has made the most of the publicity methods left to them

by MARGO PYE

NO PROBLEM which has ever faced the soap makers in Britain has been comparable in importance to that which now faces them, and which it might be safe to claim they have met successfully.

The threat to their sales which rationing and concentration has brought is not important in so far as it affects their present output of soap or soap products, nor their financial returns for these services, since both points have been already covered by legislation.

In the first case, every producer of everything, in Britain at war, can sell all he can make or is permitted to make, so that the total volume of sales of soap products is equal to the total possible production. Similarly, the importance of money has become less obvious and most British producers are not at all anxious to make money —or at least, not to make too much money.

The Excess Profit Taxation system, plus the high rate of Income Tax, make the earning of money a dubious advantage. Admitted that reserves can be built up to a certain level; that plant can be improved to the limit of available material and so on, there is a final limit to the advantage of making money in this nation at war which did not exist in peacetime. Then the money could be retained and used. Today it has so limited a value that the earning of immense profits are neither possible nor desirable. Thus there is practically no *present* threat to soap firms in the limitation of their activities, except, of course, the industry is government controlled as are all industries today.

A VERY REAL THREAT TO INDUSTRY

But there is a very definite *future* threat to the position of the industry and the various component and constituent firms in it, and it is this threat which American makers are also now facing. If they can profit in any way by the example of British action, the methods adopted here may be worth recounting. It is not necessary to list the possible loss, and the probable loss, resulting from the rationing system, beyond remarking that the enforced distribution and the controlled sales may well create habits of buying which will carry over into the peace period. The danger is obvious and is a double one, centered on the retailer as the first link in the chain, and on the consumer, the second and final link in the buying chain.

LIMITED ACTION POSSIBLE

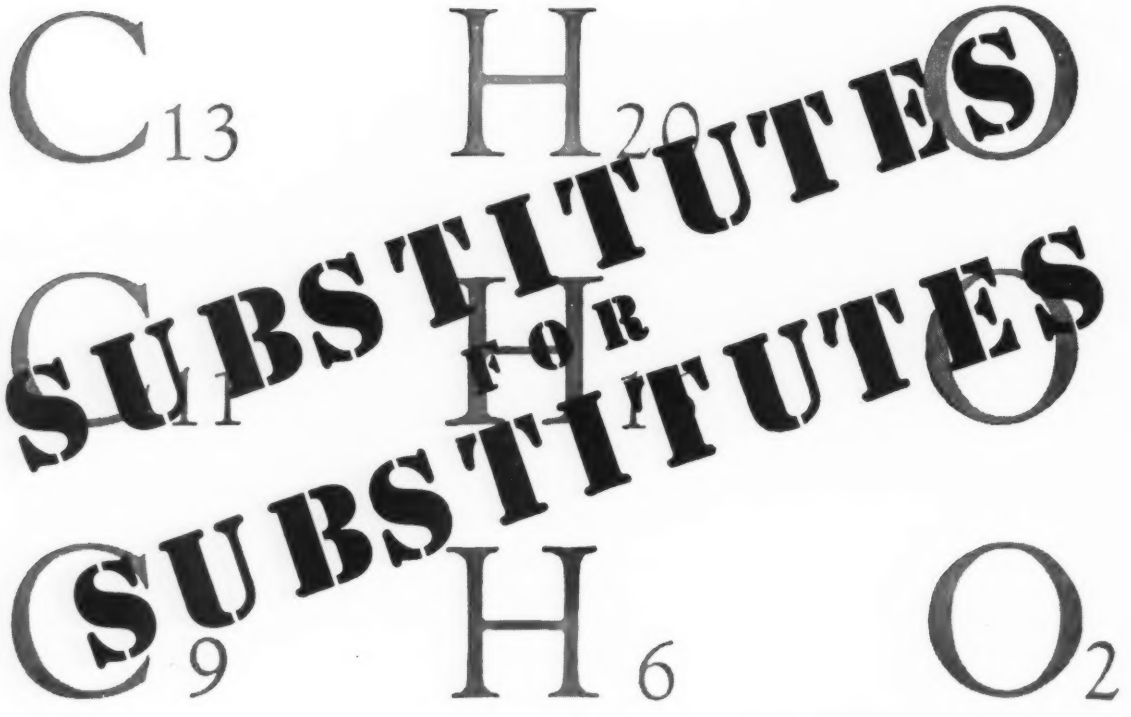
The efforts of British soap makers to retain their trade and public contacts have been necessarily limited by the fact that we are fighting a total war and that peacetime methods are no longer possible. Remembering these, and knowing today's position, the amazing thing is that it has been found possible to do as much as has been done.

Sales in Britain in pre-war days were boomed on much the same lines as in America, with the exception that we have no commercial radio to boost the benefits to the nation from the habit of regularly using "You Know Whose Soaps." We did have trade, newspaper, press and magazine advertising, poster and outdoor lighting displays, counter and point-of-sale reminders, metal and board shop display signs, circulars, propaganda vans, loud-speaker tours and cinema shows, organized demonstration and sample tour lectures and factory visits. All of these were most efficiently and artistically handled.

Today we can use only a very few of these methods. Trade paper advertising is encouraged, it is true, but newspapers have shrunk to four small pages and advertising for every type of product is limited by space considerations.

Magazine advertising is still possible and is being used to a considerable extent, but shop-display material has been banned which has rung down the curtain on all shop and window displays except those made out of materials in stock. It might seem that there would be considerable of this board and paper that could be salvaged, but, due to the salvage drive, retailers have been almost cleaned out.

Circulars are similarly banned to conserve paper; touring displays, of course, are out due to gasoline rationing. For the same reason cinema



There was a time when life for the research chemist was comparatively simple. He'd create a new formula for grateful clients, or aid in bringing costs down by suggesting a change in basic ingredients. However, that was all — in what seems — the long ago.

Today, he is a much harassed man.

Not only are vital ingredients denied him — unavailable or price prohibitive — but the substitutes that he so painstakingly created to take their place, have themselves been placed on shortage or priority listings. Today, he must concentrate the full measure of his skill in the creation of *Substitutes for Substitutes.*

Many manufacturers, fighting to keep production moving, have turned to us with their problems. We have, in most cases, been able to supply the necessary help. Our research chemists have, for more than a quarter of a century, made the Florasynth name a byword in the industry, for the creation of effective and successful synthetics. So much so, that our reproductions of natural floral absolutes and true essences have long been accepted as *primary essentials* in the manufacture of countless successful perfumes, lotions and other toiletries.

★★★ *FOR VICTORY BUY U. S. WAR BONDS AND STAMPS* ★★★

Florasynth LABORATORIES, INC.

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FLORASYNTH LABS. (CANADA) LTD.—MONTREAL • TORONTO • VANCOUVER • WINNIPEG FLORASYNTH LABORATORIES DE MEXICO S. A.—MEXICO CITY

shows and demonstration tours are impossible. And then there is the most important reason of all—labor shortage. Only the barest number of essential workers are spared to us from the fighting forces.

It can be seen from this brief resume, how very limited are the methods still left open to the soap maker to retain his good will and how immense is the problem he must face. Had the normal methods been open the obvious use of intensified publicity would have been adopted and would probably have met the need, but with these largely eliminated, the scope remaining is not too encouraging.

MEETING THE PROBLEM

What is important is this. Whatever the difficulties of doing so, the British firms have all, without exception, *decided that the retention of their brands is a major necessity* and have acted on that decision.

I cannot trace a single instance of a soap or beauty product maker leaving his brands to their fate. One and all have turned to the job all the ingenuity they can command and have made every effort to retain the maximum possible retailer and consumer loyalty. The double aim has been tackled in this fashion.

The retailer is of vital importance and soap makers are cultivating their retailers assiduously. They can no longer give him immediate delivery, they can no longer boost his sales by local shows and displays, but they can and are still maintaining the closest contact permitted. This has been done mainly by the following means:

1. Trade press advertising,
2. Special help the war schemes in which he has been coöpted,
3. By commercial traveler (drummer) contact,
4. By letter writing.

TRADE PRESS BEST AD MEDIUM

Taking these in that order, although the exact importance of the methods vary according to the firm involved, the immense increase in the importance of the trade press as an advertising medium for soap makers is paralleled by the similar discovery in every other sphere. When all other methods of contact fail, the trade magazine is a never-failing method of contacting shopkeepers in the extreme north of Scotland or in the extreme south-west of Cornwall. Weekly or monthly these magazines, although seriously cut with a fixed ration of advertising to editorial, are carrying the war-time announcements of the trade to every retailer who buys and reads. The Government has endorsed this policy in two ways; by making personal use of the trade paper by buying space to get its own messages over to the trades involved and in permitting advertising expenditure as a taxation "possible." This last point was cleared up after some suggestion that advertising expenditure was not a permitted charge, a suggestion which led to immense agitation and whose subsequent clarification was immensely welcome. It has been equally accepted in the U. S. A. and thus permits a similar use of maintenance of contact to U. S. manufacturers, should they reach the dire stage at which we find ourselves.

While the great majority are satisfied to use these advertising pages for their brand name publicity, the most vital use of the trade press has been to get war-time trading announcements as they have affected the individual firm over to the trade in immediate and mass repetition, and in this duty, the trade press has been immensely satisfactory. Soap in Britain is sold by grocers, beauty traders, general stores, departmental stores, chemists and hairdressers, and trade papers in all these fields have been extensively used.

SOAP DEALERS
It's a Date!
YOUR BIG DAY TO LAUNCH
GLASGOW'S RUBBER DRIVE
is Sunday, March 14 at the
REGENT CINEMA, Sauchiehall Street
and at the
COLISEUM CINEMA, Eglinton Street
3 p.m. to 5.30 p.m. Doors open 2.30 p.m.
PERSONAL APPEARANCE OF JACK ANTHONY
BERTHA RICARDO MEGAN EVANS
GRAND LUCKY DRAW
FIRST PRIZE £25
25 Consolation Prizes of National Savings Certificates
DON'T BE LATE!

An advertisement which calls upon the patriotism of the British people to attend a movie at which the sales angle will be deftly worked in.

SALVAGE DRIVE HELPS SALES

Special war-time schemes have not been so numerous in the retail sphere as in the consumer sphere, but one notable example is worth quoting, as a retail effort, although it also involves consumers. This is the "Save Your Rubber Scrap" scheme which Hedleys, makers of Oxydol, have been running in certain cities. This scheme demands the cooperation of retail grocers who have been visited by the firm's representatives, and who have agreed to act as rubber salvage collectors. The Oxydol makers have then used extensive daily and weekly newspaper advertising in the locations so selected in which they have asked housewives, going to these grocers for their rationed goods, to bring with them every available item of scrap rubber in their homes. The press advertising has been dramatic and has emphasized the immense need for rubber and has undoubtedly pulled results.

Soap dealers have been enthused to assist by well-planned publicity and by personal contact from elderly salesmen (we have no young men on this work in Britain these days). In Glasgow, for instance, the scheme was launched by the holding of rubber salvage film shows in cinemas granted for the purpose as a contribution to the war effort. Stage and film stars appeared to encourage dealers to cooperate and special lucky draw and highest total collection prizes were given by the soap makers. When the campaign in the particular city ended, a Salvage Ball was held for dealers and all who had cooperated at which the prizes—in the form of Savings Certificates—were presented.

The success of this particular effort has been immediate. Housewives bring rubber household goods to the collection regularly. In every case, this scheme has been the sole one adopted and has been run by the firm in cooperation with the local Salvage or City Cleansing authorities who have given immense help. In each instance the drive was confined to one city at a time, in view of strained and limited manpower for organization; in every case the firm only used a very small byline in their press advertising to show who had sponsored and paid for the scheme. But that they scored by point-of-sale display cannot be denied; the value of linking up their product in the public and retail mind with a major war-time service is obvious and is being systematically followed.

Generally, however, such efforts have been aimed at the consumer rather than at the retailer, although in this instance the effort is a double one.

CONTACTS BY PERSONAL VISIT

The third main method of contacting the retailer is by a personal visit from some representative from the company. As these travelers have difficulty of transportation, usually nothing to sell, and no solution of the retailer's problem, they are subjected to the complaints and kicks and the general maltreatment of those who know that these would-be goodwill builders have absolutely nothing to do about it. However, the companies consider it essential to retain the cus-

MERCK

A RECOGNIZED AND DEPENDABLE SOURCE OF FINE CHEMICALS FOR THE PRODUCTION OF *Cosmetic Preparations*

THE importance of high-quality ingredients is recognized by manufacturers of successful cosmetic preparations—those purchased by "brand name"—because satisfactory results have created a growing demand, and steady repeat sales.

Consumer acceptance of cosmetic preparations depends in large part on *quality, uniformity,* and *reliability.* Leading manufacturers incorporate these sales-building features into their preparations by using Merck products.

The high recognition accorded to Merck Chemicals throughout America is proof of how well the Company has kept faith with those whom it serves. Today, more than 1,500 products are supplied to physicians, dentists, veterinarians, pharmacists, chemists, laboratories, and various branches of industry.

The Merck policies of scientific research and rigid laboratory control of purity and uniformity . . . fortified by a rich tradition of experience and modern production facilities . . . assure continued leadership in present fields of chemistry, as well as in those still to be explored and conquered.

We invite you to consult us regarding your manufacturing problems and requirements

MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N.J.

NEW YORK, N.Y. • PHILADELPHIA, PA. • ST. LOUIS, MO. • ELKTON, VA. • CHICAGO, ILL. • LOS ANGELES, CAL.

In Canada: MERCK & CO. Ltd., MONTREAL and TORONTO

tomer's goodwill to as great an extent as possible and not ignore the customer entirely.

These gray-haired men, adept at soothing angry retailers, were never more valuable than now. They are the heroes of the sales front, and the retention of brand interest is to no small extent due to their efforts so far as the retailer is concerned.

KEEPING CONTACT BY LETTER

Letter writing is the last method of contact. We have not in the past been too good at that so far as business is concerned. We wrote as short and as stereotyped letters as we could. Letters now are more human and are the work of a sales department which has the very important job of explaining to dealers just why and to what extent they can, or cannot, be helped. Here, too, a greater tolerance and a greater desire to help the retailer has been shown and there can be little doubt but that this benefit will be lasting.

CONSUMER BRAND PUBLICITY

The only channel for communicating with the mass of the purchasing public in Britain is press advertising, either in daily and weekly newspapers or in the periodical press which is very well organized. By use of both types of media in sufficient and selected areas the whole of Britain can be blanketed in a day. Naturally the limitations of space make such a system of mass announcement impossible, but it is still possible to do a very grand job of press publicity by continuous and judicious use of these methods. And every soap maker of any importance in Britain is doing so.

Whatever be the type of appeal (and I shall deal with that shortly) every manufacturer knows he must keep his name regularly and attractively before his public. If he can do it on the old basis of competitive selling he will, but if he must link his sales message with war-time consideration so much the better. Nothing has been permitted to prevent that policy; space is very much advanced in price, and very limited. Only a certain defined space is permitted by the newspapers who must study the needs of all their advertisers. Price does not matter. The brand-reminder advertising is a 'must' with British advertisers of soaps, cosmetics and beauty products.

CONTACTING THE CONSUMER

The *elementary fact is* that there is no other method here permitted to retain brand favor and that being so, it has been used to the limit and is the sole method of contact still in use, by makers, aimed at consumers. It far exceeds in quantity the trade advertising and in quality is also very much in advance of the trade effort.

Appreciating the vital importance and the extensive use of this approach to the public, it is of interest to analize the appeal adopted by the larger manufacturers in Britain, as indicating their considered approach to the brand retention and prestige problem.

SPECIFIC EXAMPLES

Sunlight Flakes (Lever) are using a war-time appeal asking mothers to keep their flakes for children's wear only. The story in this series tells the public that these flakes are likely to become even scarcer and go on to give useful advice in the use of soap flakes from the economy angle.

Sylvania Flakes (Hedley and Company) make a somewhat similar approach to the brand problem by urging the use of its make to wash treasured linens. "No clothes coupons can buy them, so wash them with" they say over an illustration of Swiss embroidered handkerchiefs. In such a way this firm not only links the advertising with the coupon problem and the war situation but gets in a sly suggestion, as do Lever, that its product is the best for that particular job.

Family Health soap (John Knight Ltd.) has been telling customers that its soap is worth hunting for. In line drawings of females staggering around the city looking for Family Health soap the company has built up a theory that it is worth while doing this for the presumed pleasure of the subsequent use of this brand. "If at first you don't succeed, ask again for Family Health soap" is the way they ask customers to keep on asking for this particular brand, thereby tackling one of the discouraging aspects of rationing.

Lux (Lever) approach the problem of brand loyalty from the angle of helpful advice. In current stories the company is putting out factual information headed "The Care of Your Skin and Soap Rationing." In this way is given a two-minute method for skin care with a quarter of the soap normally used. There can be little doubt but that this series has been a successful one with a large readership and that it is more fitted to the present war-time situation and the real necessities of female soap users, than the celebrities who formerly graced the illustrations in such toilet soap advertising.

To turn for a second to the soap powder market, much the same has happened there.

Rinso (R. S. Hudson Ltd.), always aggressive advertisers, now go to town with its "New War-Time Washing Method." This method even in the days of peace was new, but now in its ads it claims it is giving the public a method that takes one-third less soap and half the hot water—which saves a bucket of coal or 40 cu. ft. of gas on washdays. This series uses factual copy with small line drawings.

In every case quoted the manufacturers are concerned, and I believe genuinely desirous to give their public advice on the best method of using its product to the greatest advantage. The only objection to swallowing that story now is that the same manufacturers in peace time urged the use of more liberal quantities of their products—as was very natural—and that it is difficult for an acute mind to reconcile their present economy methods with their former sales-pressure methods. If the job can be done on that cut amount of soap now, it could be done equally as well on that cut amount when we were not so economy conscious. But it would be perhaps unwise to be too pointed about that. The main fact remains that the soap makers are adding a valuable contribution to the economy effort by making such voluntary proposals to the nation and that no such advice can be wasted in the present emergency.

POSTER ADVERTISING

In still another sphere expert work has been done. Although poster printing is banned to a considerable extent, hand-painted posters have taken their place. Many firms have adopted hand-painted posters on linen, under glass and often with transparent effect, to complement their press advertising.

The British soap industry is very much alive these days. It is fighting for its collective and individual share of the nation's trade and all the indications are that these efforts listed here, with others used in specific circumstances, will bring it safely through the emergency with brand names still flying to the fore and with only limited alteration in relative sales figures when competitive selling resumes.

It might be wiser to say 'If' instead of 'When.' The feeling here in all industries is that there will not be an immediate return to cut-throat competition. If we have learned anything from this struggle it is that an industry cannot live on its internal warfare any more than can a nation without weakening its entire structure. That does not mean that firms will be removed or eliminated but it does mean that voluntary cooperation will be increased very considerably and that the industry will, in future, be more concerned to sell British Soap than in selling the individual maker's product.

SUBSTITUTES FOR NATURAL FLORAL ESSENCES

The growing scarcity of natural floral essences emphasizes the value of high quality substitutes

THE international situation is serving to emphasize the fact that there are countless places where synthetic floral essences can replace the natural floral products with a great deal of satisfaction and marked success.

The ingenuity of American chemists is demonstrated by the fact that American made creations not only reproduce the fragrance of the living flowers with marked fidelity and that they may be employed with complete success but that they are also *preferred* in many instances because of the uniformity in quality which they assure to say nothing of the economies they make possible.

If you find difficulty in obtaining any natural floral product write to us for a substitute. All we ask is that you give it a trial.

NORDA Essential Oil and Chemical Co., Inc.

NEW YORK OFFICE: 601 WEST 26th STREET
CHICAGO: 325 W. HURON STREET
ST. PAUL: 253 E. 4th STREET
LOS ANGELES: 2800 E. 11th STREET
CANADA: 119 ADELAIDE STREET. W. TORONTO

New Products, Ideas and Processes

Insect repellent material

In the search for suitable materials for the preparation of an insect repellent, one compound in particular has been found to be effective and that is Indalone.

Outstanding among the properties of this product are its slow-evaporating and film-forming characteristics. Virtually odorless and non-greasy, Indalone owes its repellancy to its bitter taste and its effect on the nerve endings in the feet of insects.

Face rebuilder plastic

Discoveries in plastic resin have now made it possible for war-injured and civilian raid casualties who lost ears and noses to have natural appearances restored without multiple operations. Tests of facial features from plastic resin have convinced experts the material may lead to radical changes in reconstructive surgery.

One synthetic resin can be made to produce either a very hard "ivory" or "bone," a soft resilient rubber-like substance or a liquid.

It has been used to build noses, cheeks, ears and to replace skin tissues. The substance has the same resiliency as healthy flesh and cannot become indented by pressure.

Change in odor of creams

Chemical reaction may be the cause of change in the odor of creams, sometimes for better, sometimes for worse. Such reactions may take the following form:

1. Oxidation of fatty ingredients, resulting in the formation of rancid odors.

2. Chemical reaction between the alcohols in the fatty material with the aldehydes in the perfume, forming acetals and hemiacetals.

According to *Schimmel Briefs*, where the problem is merely that of overcoming the weak basic odor of the fatty base of the ointment or cream, it is only necessary to use enough of the right kind of perfume to provide a pleasing odor.

Rancidity must not be allowed to develop, for not only is it difficult to cover up, but it may also cause decomposition of the perfume. This rancidity may be prevented by selecting proper raw materials and the use of a preservative.

Nothing can be done much about acetal formation, it seems. If this formation takes place with certain perfume compounds the strength is decidedly weakened. To obviate this, the best thing to do is to change to a perfume that is unaffected.

In other cases the effect of the acetal may be advantageous. The resulting odors may be very pleasant, though different, and are credited to an "aging" process.

Labels imprinted directly

The attractive method of permanently imprinting labels and any other desired decorative design directly on glass or plastic bottles, jars and other containers perfected by the Creative Printmakers Group, 14 West 17th St., New York, N. Y., which has been adopted with marked success by a number of leading perfumers, is now generally available. Due to the special ink employed, which was developed by the company after several years of research, it has been shown by tests, the company states, that the imprinting forms are absolutely permanent bond when used in printing plastics. In fact, it is also pointed out that it resists rubbing and scratching and is not affected by alcohol. The Creative Printmakers Group began as an organization making fine art reproductions for the Metropolitan Museum of Art and other art galleries. From this work it evolved into making fine art reproductions and prints for displays and packages for the cosmetic industry.

Insect repellent lotion

A new lotion—minus the objectionable citronella odor—has recently been developed, the application of which, it is claimed, will repel all common insect pests, such as mosquitoes, many types of flies, including sand flies and black flies, chigres and various other insects. Its effectiveness ranges from one to four hours depending upon conditions; with a minimum of two hours a safe average.

One of the unique features of this new lotion is that it repels insects out of doors when the skin is more apt to be moist than indoors when the skin is dry.

Latin American essential

Production possibilities of essential oils used in the perfumery and cosmetic industry are being explored in several of the Latin American countries as replacements in part of the 10,000,000 pounds imported annually in pre-war days from outside the Western Hemisphere, according to the Office of Coordinator of Inter-American Affairs. Experimental beginnings are under way in the production of some of these essential oils, and prospects of producing others are being investigated in South and Middle America.

New maltless alcohol process

A new alcohol process has been discovered by Dr. A. K. Balls and Irwin W. Tucker of the Bureau of Agricultural and Industrial Chemistry of the Department of Agriculture that does not employ barley malt. In this new method a solution of sodium sulfite is used to extract diastase from wheat before it is cooked. The resulting solution replaces the barley malt now employed and at the same time the sodium sulfite extracts the protein content of the wheat, which may be used for livestock feeding and perhaps for human food.

New side seal glass closure

With the new side seal glass closure developed by the Hartford-Empire Co., a complete package made entirely of non-critical material is provided. It is applied on a glass container using a non-rubber gasket.

Detergent from resins

A sulfonated resin product suitable for dispersing and detergent purposes is formed from the resinous residue remaining after separation of the rosin from the total resinous extract of pine wood. The residue used is insoluble in petroleum hydrocarbons. This is the subject of *U. S. Patent* 2,308,029 by A. L. Rummelsbur, assigned to the Hercules Powder Co.

Dispersing agent

In German Patent 709,088 of Bohme Fettchemie G.m.b.H. the lower alkyl, aryl esters of sulfonated higher saturated hydroxy and polyhydroxy fatty acids are used as wetting and dispersing agents.—*Chem. Abs.*

Synthetic detergent

"Philcosol" a dry powder in various strengths is a new synthetic detergent raw material by the Phillips Sales Co. It is said to be effective in a broad range of products including cleaners, bubble baths, hard water soap, etc.

New display guide

The need for simpler displays easy to install has prompted the Sherman Paper Products Corp. to issue a new Sherman Display Guide. The idea is to present ingenious suggestions to quickly provide attractive and new effects in window and interior decorating. A copy of the guide will be sent to anyone interested.

SERIES 106 AND 107

Floral Notes and Original Bouquet Odors for Extracts and Lotions

Created by master perfumers . . . to satisfy today's exacting tastes . . . to help overcome the pressing perfume problems of the hour . . .

When requesting samples advise whether interested in floral or bouquet types and indicate price range . . .

ROURE-DUPONT, INC.

366 Madison Ave.
New York, N. Y.

R.D

Sole Agents for:
Roure-Bertrand Fils & Justin Dupont
Grasse, France

CHICAGO ◆ NEW YORK ◆ LOS ANGELES

Our Washington Correspondent Reports to You

by ARNOLD KRUCKMAN

Peppermint-oil-menthol problem still up in the air

Government officials in Washington are just as much at sea about the peppermint-oil-menthol problem during the closing days of July as are the growers and dealers in the United States and elsewhere. Mr. Frank A. Delgado of OPA has not permitted the slightest word to leak out concerning the results of the questionnaire he sent broadcast on July 13 over Administrator Prentiss Brown's signature. The situation has relatively caused just as much exasperation in Washington official circles as it has caused elsewhere. The War Food Administration has been unable to make the allocations and is constantly under pressure from the dealers who sell to the food industries, from WPB Chemical Division which distributes the quota that is allocated to the pharmaceutical people, and from the Lend-Lease people who want it for the British. Mr. Delgado and his associates actually have corked up the potential decision about price ceilings so tightly that no one will even attempt to guess what the prices will be.

New sources to produce the oil from which menthol may be made

Meanwhile there is much activity in the effort to develop new sources to produce the oil from which menthol may be made. We are told there is some optimism about the possibility that a certain type of oil may be produced in Brazil which is an equivalent for peppermint, at least so far as its use for the making of menthol is concerned. The report is expected very shortly. We also know they are growing peppermint in at least ten Mexican experiment stations, under the recent agreement negotiated by the State Department. This contract for economic cooperation involves our promise to aid Mexico to expand her present industries and to establish new ones. We undertake to make available supplies and equipment, and to furnish technicians and experts, some of whom apparently already are down there. Special emphasis is placed on the program to develop industries based on chemicals, sugar, alcohol and similar activities. It appears obvious we will give the agriculturists and the industrialists of Mexico the benefit of the vast resources of knowledge we have assembled in agencies like the Department of Agriculture and the War Production Board. There is no secret about the fact that the United States is intelligently sponsoring various developments "south of the border", probably deep down into South America. The responsibility rests with the Office of Economic Warfare, the Inter-American Office of WPB, the Department of State, the Army and other agencies. But it is practically impossible to obtain information about the location of the activities.

Ocimum oil from the Belgian Congo may be source of menthol

Department of Commerce also is much interested in the potential resources for menthol in other oils produced in Africa. It is particularly watching the Belgian Congo where there is now a medium-sized facility for the production of ocimum oil. It is stated this substance contains 44 per cent phenol, most of which is thymol. The word is that meta-para-cresol is known to be capable of conversion into menthols. Commerce feels it would be good business for our people to investigate ocimum oil exhaustively, to discover its adaptability as a source for menthol. The Belgian colonies give primary consideration to food uses. There appear to be plenty of oils. The question seems to be whether or not the ocimum oil can be used to make menthol to sell under the price ceilings fixed by OPA. Information about the details and the people involved in the commerce of ocimum oil is available in the New York office of the Department of Commerce, or in the Drugs and Pharmaceutical Unit of the Foreign and Domestic Commerce Bureau of the Department of Commerce in Washington.

Canadian firms report increased cosmetic and toilet production

From Canada the Department of Commerce brings the interesting report that its manufacturers produced 16 per cent more cosmetics and toilet preparations last year than they made in 1941. Last year's total reported by leading Canadian firms had a value of $11,813,999. Soaps and allied products manufactured in Canada in 1942 by 119 firms increased 14 per cent over the product of 1941. The total product was valued at $29,252,469. Exports increased to the extent of approximately $2,000,000. The prosperity of the business in Canada is attributed to intra-Empire trade. Canada naturally does a very considerable business with non-sterling members of the Empire family. Parts of the Empire like the Union of South Africa are good customers for cosmetics and toiletries. This market, logically, is not open to the United States and other non-Empire suppliers.

Reorganization in WFA and in section handling cosmetic and toiletries

The shift in leadership of the War Food Administration has been far more uneventful than almost any other change in command that has taken place recently in Washington agencies. Part of the lack of events naturally is the result of the vigorous check against the custom of laundering the soiled linen in public. WPB recently has had very important changes in personnel, even up as high as in the powerful Facilities Review Committee, but the public has heard little about it. The scandals and turmoils connected with other events made the taxpayers so mad that they lashed out violently in all parts of the country. Washington was deeply impressed with the feeling reflected by the usually inarticulate voter, and Washington therefore is strenuously striving to keep the lid on.

In the Department of Agriculture they have made genuine progress in effectively organizing that part of the War Food Administration which regulates most of the business of cosmetics and toiletries, as well as flavors and extracts and beverages. The active top leadership heads up in the office of Roy Hendrickson, who is the chief official of War Food Distribution. Under him is H. C. Albin, one of the veterans in the Department of Agriculture. Mr. Albin heads the Special Commodities Branch of the War Food (Distribution) Administration. L. Thornton Davis,

lotions and colognes

containing little or even no alcohol

need present no perfuming problem.

We offer a varied line of especially soluble perfume compounds ideal for such uses.

Write us on your firm's letterhead
for further information and samples.

Schimmel & Co., Inc.

601 WEST 26th STREET NEW YORK, N. Y.

CHICAGO • CINCINNATI • CLEVELAND • LOS ANGELES • ST. LOUIS • SAN FRANCISCO

whom many of you will remember with pleasure, has been promoted to the place of assistant chief of the Special Commodities Branch; and under him, as part of Mr. Albin's branch, there is the Chemicals and Special Products Division, which is headed by V. L. Bushman, as acting chief. Under Mr. Bushman, in the Chemicals and Special Products Division, Dr. A. L. Kalish is chief of the Essential Oils Section, which includes flavors and extracts. You know, of course, that Dr. Kalish buys the concentrates and oils which are shipped abroad by Lend-Lease and similar agencies.

Division handling spices has the reputation of being most cordial

In the Branch headed by Mr. Albin there is also the subdivision which handles the regulations which affect spices. The most direct relations with the Spice Section is maintained by the public which comes in contact with Mr. Fletcher H. Long, who came from Baltimore, where he was connected with the McCormick firm. Mr. Long has the reputation of being one of the most competent men in his field, and he apparently has an extraordinary understanding of the implications of his particular industry in connection with the domestic economy of the home life of the people of the nation. Here in Washington they regard Mr. Long as one of the most practical men as well as one of the wisest who has come from the ranks of business into the war emergency service of the Government. There is scarcely any one in the personnel of the Commodities Branch who has failed to impress the public with a sense of sincere desire to be helpful and to be understanding. The people in this branch make a very special point of their desire to become thoroughly acquainted in person with the men and women of the industries served by this part of Government. They ask that word be passed along that they will cordially welcome any visitor in Washington from the scattered units of the industries. It seems to be the idea to make clear that those who have been reluctant to call because they have not been certain of their privilege to do so shall be made to feel no one has any special privileges. Everyone will be equally welcome.

ODT ban on package delivery eased

ODT has ruled that in regions with stringent gasoline rationing, merchandisers may deliver small parcels daily if they are consolidated in weight to exceed five pounds and are 60 inches long and wide.

Allocation 100 per cent of castor oil will relieve lipstick makers

Another interesting item is the news that castor oil will be allocated 100 per cent immediately. This will bring relief to lipstick makers and to manufacturers of various creams and similar products. The order making the supply available is expected to be out before this report is published.

Future of liquid spices—dry spices too ingrained to change

Spices have been to the front recently in a series of formal and informal conferences. There has been some debate about the relative usefulness of spices in liquid form and in the form most familiar to the housewife. The liquid concentrate producers have naturally taken time by the forelock and have made an effort to set the stage to expand the use of liquid concentrates more widely in homes during the war emergency. There seems no great argument over the assertion that in some instances liquid concentration of spices is more economical in securing the widest possible utilization of limited supplies. It seems clear, however, that the housewife and the domestic user, since the middle ages when spices were introduced to Europeans, have adjusted their food habits and food practices to dry spices; and this deeply ingrained social custom is the basis upon which a huge industry has been built. From some standpoints it might be smart to use the war emergency to break down this habit of the ages. But from another standpoint it does not seem sound to tamper with the existing business economy that has been built upon the established habits of peoples. There is a universal feeling that the war inevitably has hurt many businesses for which there was no manner of relief, but that it would be fantastic to violate a business which is not running crosswise to war needs. The gentlemen in the Commodities Branch of the War Food Administration have suggested the very reasonable solution that dry spices be left to the domestic users, and that liquid spices be applied to the industrial market. It seems likely this suggestion will settle the debate.

Army and Navy coordinate purchasing of toiletries and cosmetics

Army and Navy have coordinated their purchasing facilities for Army Exchanges and Ships' Service Stores of the Navy. These are the channels that sell cosmetics and toiletries. Prices are negotiated directly with suppliers, and the prices as fixed are sent to all officers in charge of Exchanges and Stores. These officers usually make their purchases direct for their individual Stores or Exchanges. Lieut.-Commander Arthur E. Wills, U. S. N., is the joint representative to negotiate prices and to make certain purchases. He has an office at the Procurement Division of the Army Exchange Service, 25 West 43rd Street, New York.

Glassine, greaseproof and vegetable parchment prohibited for wrapping

Order M-266 amended on July 23 prohibits the use of glassine and greaseproof and vegetable parchment to wrap cosmetics, dentifrices, toilet materials and soaps. The same order prohibits the use of the same papers to wrap whole spices, except cloves and mixed pickling spices. The original order had permitted the use of these specialty papers when laminated to the body of a container. This does not appear in the amended order.

High quality absolute extracted from coffee blossoms

From the Department of Agriculture comes the word that its great experiment station in Porto Rico has been successful in removing coffee blossoms for perfume oil extraction without disturbing the regular output of coffee in the bean. It has been found that using the blossoms for perfume has produced a stronger and better grade of coffee. The Station reports that ethyl ether extracts an absolute of high quality while petroleum ether, another good solvent, cannot be obtained. They have found that when they freeze the blossoms before extracting the oil they get an increase in yield. The essential oil of coffee is said to have a delicate and persistent aroma, and it is reported it can be fractionized and blended to secure amazing fragrances.

Combination of substitutes may obviate glycerin shortage

Various agencies are trying very actively to demonstrate in a practical sense that invert sugar is a good substitute for glycerin in cosmetics and certain food products. Government also is said to be on the brink of announcing that the newly developed apple syrup used in tobacco as a substitute for glycerin may be used widely in many other cosmetics products. The Department of Agriculture has about reached the conclusion that no one substitute will take the place of glycerin, but that the combined total of various replacements, applied specifically for various uses will almost completely wipe out the glycerin shortage.

STANDARD *Synthetics*

MIRROR NATURE PERFECTLY

For true and pleasing odors, go to Standard Synthetics. All Natural Essential Oils and Aromatics in stock. Exquisite Perfume Bases suitable for all purposes. Send us your problems.

SPIKE LAVENDER OIL	OAK MOSS
LABDANUM GUM	CINNAMIC ALDEHYDE
ORANGE OIL	BERGAMOT ARTIFICIAL

STANDARD *Synthetics,* INC.

119 West 25th Street — New York, N. Y.

CHICAGO • SAN FRANCISCO • KANSAS CITY

War Check List

Federal rules and regulations on price control, allocations and other regulatory measures issued or proposed during the past month.

WPB issues restrictions on the manufacture of displays

WPB General Limitation Order L-29 issued July 8th, places restrictions on displays.

The order establishes quarterly quotas beginning July 1st. Based on the corresponding calendar quarter of 1941, quotas of paper or paper-like substances and on board are 66 2/3 per cent of the gross weight of material used in the base period, except, that a 15 per cent leeway is permitted provided any excess is deducted from the quota from the following calendar quarter. Further leeway is provided for persons who do not use up their quota in any calendar quarter. They may in the following calendar quarter use material in the equivalent of their less-than-quota usage.

The user of the displays is in no way accountable for the materials he uses; it is the manufacturer of the displays who is liable should there be any overstepping of quota regulations.

Inedible tallow and grease deliveries under FDO-67

According to the FDO-67, issued July 26th by the FDA, each producer of inedible tallow or grease is required to fill purchase orders authorized by FDA and placed by industrial users, other than soap and glycerine manufacturers, up to 30 per cent of such producers' monthly deliveries of inedible tallow or grease. After providing for such priority orders, which must be in the producers' hands before the 10th of each month, deliveries may be made to soap and glycerine manufacturers without restrictions. The limitations do not apply to any manufacturer who consumes 5000 pounds or less a month.

This order was issued to assure manufacturers of products other than soap and glycerine a supply of these products for essential war needs and went into effect Aug. 1.

In the order it is also provided that after August 1 no manufacturer of soap may have an inventory of inedible tallow or grease larger than one-fourth of the aggregate amount of inedible tallow or grease used by him during the six months' period from Oct. 1, 1942, through March 31, 1943. Producer and dealer inventories are even more restricted. If over-inventoried, manufacturers need not dispose of this surplus, but they may not purchase additional quantities.

Inventories may be exceeded at any time a manufacturer can buy at less than ceiling prices under Revised Price Schedule 53, provided he does not make any purchase at the ceiling price until his inventory is adjusted. This does not apply to the imported products.

By the term "inedible tallow or grease" is included all grades and qualities of inedible animal tallows, greases and stearines produced therefrom, but excludes garbage grease, wool grease, grease (lard) oil, neatsfoot oil and stock, stearic acid and red oil.

Limited manufacture of closures from scrap metal in the offing

There is word that closures may soon again be made of metal. It is anticipated an amendment to the closure order will shortly be promulgated permitting limited manufacture of closures from scrap metal and lay sheets. While this will take some of the pressure off the closure problem it should be realized that only a very limited quantity of metal closures can be made from the metal that will be available.

Allocation Order M-336 amended effects glycol ethers

Producers of glycol ethers according to allocation Order M-336, as amended July 14, are prohibited from delivering without specific authorization more than five per cent of the total quantity of material they are authorized or directed by WPB to deliver in any one month.

The amendment also substitutes the word "producer" for "supplier" in paragraph (c) (2) of the original order dated June 22, 1943.

It was explained that restrictions of the suppliers, including both producers and distributors would have worked a hardship on the latter, since the five per cent restriction on distributors would have been too severe, as most of their shipments in a given month are small orders.

The spelling of "Ethyl glycol" in Appendix A of the order was corrected to read "ethylene glycol."

Pref. Order M-30 eases delivery restrictions on ethyl alcohol

Preference Order M-30, as amended July 15th removes restrictions on delivery and use of ethyl alcohol outside the continental United States. This action was taken to bring the order into conformity with M-54, as amended (Molasses order).

Scrap metal to be made available for manufacture of lipstick cases

The other good word concerns lipsticks. As you know, the past three months there has not been a scrap of cellulose acetate available for lipsticks, and the lack has caused the industry many headaches. It is now absolutely certain there will be some cellulose acetate released for lipsticks in August. The word has gotten around in some quarters, and the lipstick people have been so eager to get their share of the containers that the molders already have orders for six times as many as may even remotely be needed. This situation obviously gives the people in C. A. Willard's part of WPB very considerable headaches.

Inventory Limitation Order L-219 broadened

The WPB recently amended its Inventory Limitation Order L-219, broadening the restrictions. Any wholesaler or retailer whose inventory amounts to $50,000, or whose sales total $200,000 or more a year will be subject to the new limitation. The former order called for both a $50,000 inventory and the $200,000 sales in order for a company to be affected.

The purpose of the order is to make a more equitable division of the burden. Formerly, companies carrying large inventories and doing small sales, and those doing large amount in sales but carrying a small inventory were not affected.

Voluntary simplification of paper box packages

A proposal to simplify the paper boxes used by manufacturers of toilet goods and cosmetics for over-the-counter trade has been approved, according to reports of the Division of Simplified Practice of the National Bureau of Standards. The voluntary recommendation went into effect as of July 1st.

The recommendation aims to reduce the amount of paperboard used for packaging. This is accomplished by setting up maximum thickness of paperboard used for these boxes, by restricting the size of box in relation to the size of the contents, and by limiting the number of protection covers or containers. The recommendation also calls for desired simplification to eliminate frills which waste critical materials.

Copy of the recommendation giving details of the method for reducing paper use may be obtained upon request from the Division of Simplified Practice, National Bureau of Standards, Washington 25, D. C.

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Cellulose plastics-allocation Order M-326-a amended

According to an amendment to Supplementary Allocation Order M-326-a, the timing of applications and allocations of cellulose plastics is changed from the basis of the month in which deliveries are to be made to the basis of the month in which they are to be put into production. Further, cellulose plastics in the process of manufacture on or before July 1, 1943, can be disposed of by the suppliers without WPB authorization.

Order M-30 amended—cuts alcohol for mouth washes

The WPB in an amendment to General Preference Order M-30 has included additional restrictions on the quantity of ethyl alcohol available for use in mouth washes and in antiseptics for all uses.

In manufacturing these products, no person may use more than 60 per cent of the quantity of ethyl alcohol which was used for the products during the corresponding quarter in the 12-month period ending June 30, 1941. Exempted from provisions of the order are small users. These may receive 54 gallons of ethyl alcohol, in any month, provided that the aggregate quantity of alcohol received by him in the quarter in which such month falls, does not exceed 162 gallons.

WPB amends Priorities Regulation 13

Priorities Regulation 13 describing the rules under which materials, both new and used, may be sold by persons who are not in the regular business of selling such materials has been amended. There is a very long and varied list of materials included in this order and those interested can obtain a copy from their local WPB office.

Soap wraps other than wax cut to 80 per cent (M-241-a)

Converters of paper and paperboard into "soap wraps except wax" are limited to 80 per cent used in 1942 (Order M-241-a) issued July 31. This applies to display paperboard and also containers.

FDO-60 to aid in the conservation and distribution of fish oils

The Food Distribution Administration has issued FDO 60 which applies to oils pressed from West Coast mackerel, tuna and salmon, with the idea of conserving the supplies of fish oils. Fish liver oils are not included. Under this order, manufacturers of water soluble soap may use 40 per cent of the average amount they used during the calendar year 1940 and 1941.

The order permits unrestricted use of 1000 pounds of oil a quarter by any industry provided the total use in a quota period — which means the 12-month period beginning July 1st of any year—is not more than 4000 pounds.

Clarification of FDO-42 in regard to soap manufacture

Fats and oils used in making soap that is delivered under or to be delivered to Post Exchanges and Ships' Service Stores, both within and outside the Continental United States are exempt from the quota limitation of FDO 42 as amended July 10, 1943. Also fats and oils used for the same purpose for Lend-Lease are ex-quota when made by the agencies mentioned in Paragraph (b) (5) (ii) (b) or Amended FDO-42.

OPA and 18 leaders of industry to cooperate on prices of cosmetics

The OPA has appointed 18 leaders of the wholesale and retail drug trade to cooperate with OPA on prices of drug and cosmetic products and rubber drug sundries.

It is stated that this constitutes about 50 per cent of the entire volume of sales through retail drug channels. The committee held its first meeting in Washington on August 3rd.

British restriction period for toilet preparations extended

The Board of Trade in Great Britain has extended the Toilet Preparations Order of December 23, 1942, for two months thus ending August 31.

The quota of all controlled toilet preparations, including rouge and rouge powder but excluding face powder and toilet dusting powders is on the basis of 20 per cent per annum; that is, for the six months ended June 30, 1943, the registered person could supply 10 per cent of his supplies in the standard period (June 1st, 1939, to May 31, 1940). This was increased to 50 per cent p.a. (25 per cent during the old restriction period) by special licenses to firms taking part in approved concentration schemes in areas having no outstanding demand for labor or space for essential national needs. Registered manufacturers whose quotas for these preparations are less than £250 during the six months' restriction period could nevertheless supply up to that amount.

The quota for face powder and toilet dusting powder (excluding rouge and rouge powder) is on the basis of 65 per cent p.a. of supplies in the standard period; i.e., 32½ per cent during the six months' restriction period, for all registered firms whether or not they possess a nucleus certificate.

The total quantity of controlled goods of his own manufacture which a registered manufacturer may supply during the extended (eight months) period is thus:

Powders: 43 1/3 per cent of his supplies of powders in the standard period.

Other toilet preparations: 13 1/3 per cent of his supplies of toilet preparations (excluding powders) in the standard period or £333.6s.8d, whichever is the greater.

Otherwise all the provisions of the Toilet Preparations Order 1942 will continue to be operative in the extended period and manufacturers will enjoy the same advantages as hitherto.

Brief items of late Washington developments

Bismuth for cosmetic uses is limited to 50 per cent of the 1942 basis; citric acid for beverages was allocated on the basis of 15 per cent of the third quarter use in 1941.

Food Distribution Order 69 prohibits fermentation of practically all fruits and berries.

An amendment to M-622 limits the delivery of caffeine without special WPB authority to two pounds per month, except in case of deliveries for medicinal purposes which are limited to 10 pounds per month, without specific authority.

RSR 14, issued by OPA July 13, is a modification of maximum prices established by General Maximum Price Regulation. It includes several items of interest to your industry. You may get a copy at your nearest OPA office.

Honey has now been placed under administrative regulation of War Food Administration. Use of corn to make alcohol was completely prohibited during July. Alcohol is still as tight as it has been, and there is no prospect immediately of any change in the situation. However, the order restricting exports was modified permitting Porto Rico to use alcohol made from its own molasses for industrial purposes. No glycerin may be used for cosmetics, lotions, dentifrices, beverages, flavors, shaving creams, soaps, shampoos, hair tonics; glycols were granted for toothpaste and cosmetics, but cut to schedule adjusted to current conditions; glycols for flavors were cut to 50 per cent; isopropyl alcohol was denied for cosmetics; phosphorus was cut 15 per cent for use in dentifrices, 60 per cent in soaps and 15 per cent below the 1941 basis for beverages. Phthalic anhydride was denied for use in hair rinse. Order M-336 prohibits delivery of more than five per cent of glycol ethers authorized for delivery in any one month.

Here and There Among Our Friends

▸ Adrian Pellanc who has been associated with the cosmetic industry for 35 years since his arrival in this country from Paris, France, has become associated with Evans Chemetics Inc., New York, N. Y., as chemical adviser in the Ninth Ave. plant of the company.

▸ Leon A. Danco, Jr., son of Capt. Leon Danco of the U. S. Marine Corps, and formerly head of the Lucretia Vanderbilt line of toiletries of McKesson & Robbins, expects to get his ensign's commission this Autumn. Following his graduation from Harvard last May he entered the Coast Guard School in Boston specializing in radio navigation.

▸ Luis deHoyos the colorful mayor of Monticello, N. Y., Republican county chairman and general manager of Synfleur Scientific Laboratories, has been appointed chairman of Reception of Distinguished Foreign Guests for New York State. In a nation-wide broadcast Arthur Hale in his program "Confidentially Yours" discussed Mr. deHoyos and his new opportunity for public service.

Luis deHoyos

Mr. Hale said in part: "There is nothing of the small town about Mr. deHoyos's personality. Mayor deHoyos is indeed a cosmopolite who is not unknown in cultured drawing rooms abroad. A member of a distinguished Spanish family, he came to America in his youth and became associated with the chemical company which he now manages. He is serving his fourth successive term as Monticello's coalition mayor . . . Despite his Spanish accent, he succeeded last year in being elected Republican chairman of rural Sullivan County . . . In the course of his business he has made scores of trips through South and Central America and his contacts in these countries are numerous. So when the International Congress of Municipalities was to convene at Lima, Peru, the State Department named him special delegate. State department officials who attended reported that the Mayor literally took the Congress over. In any event he was elected its permanent technical adviser. When the session closed he started on a speaking tour which took him through 25 Latin American countries, a route of more than 20,000 miles. He has been offered his pick of important key positions in the new American bureau on inter-American affairs but has thus far found it impossible to leave his business.

"Several years ago, Mayor deHoyos achieved international fame when he posted notices in his village to the effect that "only old women may wear shorts on the streets of Monticello." His purpose was to avoid an out-and-out ban and to shame the girls out of their shorts, so to speak. In some degree, it worked.

"Then, in 1940, he hit the front pages again with his copious telegraphic advice to Candidate Willkie, whom he had at that time never met, on how to conduct the campaign. Then, with a fine impartiality, he sent a few advisory telegrams to Jim Farley, who was running the Roosevelt campaign. Evidently, Farley got them but Willkie didn't, for Roosevelt won."

▸ Edward C. Liebert, vice-president of La Mode Chez Tappé, Inc., distributors of the Helen Liebert line of perfumes, is now a Lieutenant Junior Grade, and is stationed temporarily at the Boston Navy Yard.

▸ Louis A. Rosett, pres. of Florasynth Laboratories, New York, and Mrs. Rosett have announced the marriage of their daughter, Betty, to Herbert Stanley Hollender, aviation cadet, U. S. Army. The wedding took place July 19th in New Rochelle.

▸ H. Gregory Thomas, vice-president in charge of Public Relations of Bourjois, Inc., New York, is on a mission for the Government and is at present located with American Embassy in Lisbon, Portugal.

▸ Dr. Alexander Katz, of the Florasynth Laboratories, Inc., having returned recently from Mexico, delivered an interesting talk on the vanilla bean industry of that country, supplementing same with moving pictures in technicolor. The talk followed a "point" dinner which took place at the Sir Francis Drake Hotel in San Francisco. The flavoring, candy, ice cream and cosmetic industries were well represented. Paul G. Fourman, manager of the San Francisco branch, acted as host and, for lack of help, allocated the liquid from an improvised bar. Dr. Katz has displayed the same pictures in Seattle and other Pacific Coast cities.

▸ In the office of Mr. Sussman, president of Parfums Moneau, are two photographs of a very handsome young man; one in the uniform of the French Army, the other in the uniform of the U. S. He is Andre, son of Mr. and Mrs. Richard Sussman. At the age of 18, he was an officer in the 75th artillery of the French Army. Shortly before the armistice he was wounded and taken prisoner by the Nazi from whom he managed to escape. A short time later he came to this country and enlisted with the U. S. Forces; entered officers training at Fort Benning, Ga., and was graduated July 10th. He was determined to become a paratrooper, the most dangerous of all branches. He has completed his ground training and now has his wings. Lt. Sussman says "They got me last time, but I'll get them this." Who says we won't win the war with such spirit!

▸ On Sunday, July 4th, Lieutenant Louis Kenneth Rosett, son of Louis Rosett, president of Florasynth Laboratories, Inc., New York, was married to Jean Clara Hermann, daughter of Mr. and Mrs. Karl Hermann. The ceremony took place in New Rochelle.

▸ The many friends of Pierre Danco, vice-president of Gerard J. Danco, Inc., will be glad to hear of his recovery from an eye operation performed at York's Hospital July 14th. The operation was 100 per cent successful and Mr. Danco has been back at the office for short visits several times.

▸ Thomas R. Farrell, editor of *Drug & Cosmetic Industry*, New York, N. Y., is receiving the congratulations of his host of friends on the arrival July 29 of William Daniel Farrell at Doctors' Hospital, New York. Mr. Farrell has three children, one of whom is a girl. Both mother and son are reported to be doing splendidly.

▸ Miss Constance Stahlmeier, daughter of Mr. and Mrs. Arthur Stahlmeier, of Cincinnati, Ohio, was married at Trinity Episcopal Church in Boston, Mass., on July 23, to Aviation Cadet Albert Wiswell Badanes, U.S.A.C., son of Mr. B. Harry Badanes, New Rochelle, N. Y., vice-president of McKesson & Robbins.

Cadet Badanes, who expects to receive his army air corps commission in September, is now at the Massachusetts Institute of Technology.

▸ Lieut. Arthur Lincoln Bender, Jr., son of Arthur L. Bender, Sr., of the Rap-I-Dol Distributing Corp., New York, N. Y. is now overseas doing photographic reconnaissance for the army.

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U.S.I. CHEMICAL NEWS

August ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1943

U. S. Industrial Alcohol Co. Merged Into U. S. Industrial Chemicals, Inc.

New Acetone Uses Developed Covering Many Varied Fields

Importance of Chemical Shown By Study of Recent Patents

Although generally considered a staple chemical with a fairly limited although important field of utility, acetone is finding many new uses in a wide variety of processes. As an indication of the unexplored possibilities of this highly reactive chemical, a study of recent patents reveals many such applications. A few of the more interesting are outlined in the following paragraphs as described by their inventors.

In the rubber compounding field, for example, a typical new use for acetone is in condensation with aryl amide to produce an age resistor for rubber which is particularly effective at elevated temperatures.

For inhibiting oxidation in rubber, another inventor recommends incorporating about 0.1% or more of a product of thermal reaction of a ketone such as acetone, an aliphatic "hydrocarbon alcohol" such as isopropanol, and a secondary di-aromatic amine such as diphenylamine in the presence of an acidic catalyst, with elimination of water.

One use for acetone in the metal-working field is its use in combination with boron trifluoride. An organic flux for soft soldering metals is obtained which is described as noncorrosive when left in contact with the metal being soldered and yet which mildly, but uniformly, attacks the metal surface during the soldering operation.

To produce a solvent for dewaxing mineral oils, acetone is recommended in combination with amyl mercaptan. Certain treated waxy lubricating oil stocks of 70 seconds Saybolt universal viscosity when mixed with such a

(*Continued on next page*)

Composition Developed for Treating Plastic Materials

BURBANK, Calif. — A patent has been awarded to an inventor here for a composition suitable for use in the treatment of cellulose derivatives, such as photographic film, which is claimed to be effective either to prevent shrinkage and deterioration or to restore the normal characteristics of such materials after having undergone a loss of their volatile constituents.

The composition comprises an azetropic mixture of one or more volatile organic solvents, such as dibutyl phthalate, and one or more volatile plasticizing agents such as ethanol, isopropanol, butanol, and ethyl acetate.

By constant research and development, U.S.I. has expanded its activities until it is not only one of the largest industrial alcohol manufacturers, but a major producer of chemicals and solvents derived from alcohol.

High Bactericidal Properties Claimed for New Compound

DALLAS, Tex. — A new compound, hexamethyl-para-rosaniline-chloride-copper, has been patented by two inventors here which is said to have remarkable bactericidal, protozoadidal, ovacidal, and fungicidal action while remaining relatively harmless to body tissues.

As described by the inventors, the process of preparing this compound includes dissolving 1.5 grams of crystal violet dye in 10.5 cc. of ethanol and 90 cc. of water having 2 cc. of 95% U.S.P. lactic acid therein. Approximately 90 cc. of the first solution is then mixed with 8 cc. of the second solution and 2 cc. of water.

Improving Soya-bean Oil

A process for improving the color and extending the pre-reversion period of soya-bean oil which may be partly hydrogenated or refined has been reported. The oil is heated for several hours under reduced pressure in the presence of superheated steam if desired, at 205-260° with 0.01 to 0.5% of glycerol to remove volatile constituents.

New Name Signifies Increasing Interest in Growing Chemical Field

Effective at the close of business on July 16th, U. S. Industrial Alcohol Co. has been merged with, and into, U. S. Industrial Chemicals, Inc., in line with the Company's increasing interest and growing activities in the broader field of industrial chemicals — and consistent with the present trends in the research and development of U.S.I. products.

Originally organized in 1906 under the name of U. S. Industrial Alcohol Co. for the express purpose of manufacturing industrial alcohols, the Company has gradually increased its activities in alcohol-derived solvents, chemicals and intermediates.

U.S.I. Activities Increase

Interest in the development of related alcohol-chemical products has continued until today U.S.I. offers a most complete line of these products for applications and for organic syntheses in new fields of endeavor.

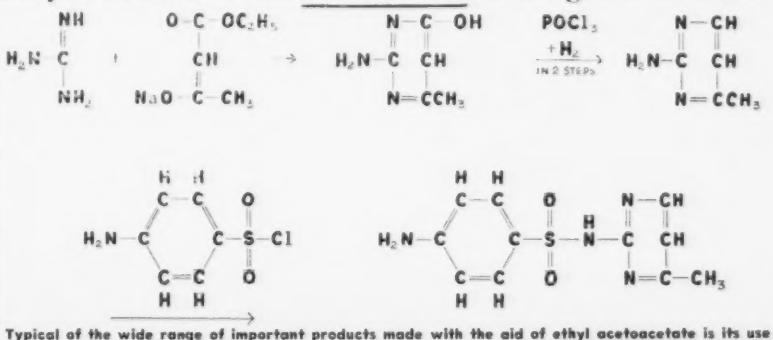
Among important recent additions to the U.S.I. line are a number of new acetoacetarylides, developed in recognition of the growing importance of yellow pigments and dyestuffs, and ethyl benzoylacetate, an intermediate useful in the manufacture of dyes and the synthesis of many chemical compounds. U.S.I. has also recently manufactured quantities of Indalone, insect repellent outstanding for slow-evaporating and film-forming characteristics, and ethyl sodium acetone-oxalate, a highly reactive chemical.

New Glycerol Method

Another significant contribution made by U.S.I. during the past year was the development of a commercially practical method for producing glycerol by fermentation of molasses which is expected to alleviate the cri-

(*Continued on next page*)

Ethyl Acetoacetate Used as New Sulfa Drug Intermediate



Typical of the wide range of important products made with the aid of ethyl acetoacetate is its use as an intermediate for the new sulfa drug sulfamerizine, which is reported to be more powerful than sulfadiazine and less liable to cause damage to the kidneys. Sulfamerizine can be produced in accordance with sequence shown above.

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August ★ **U.S.I. CHEMICAL NEWS** ★ 1943

U.S.I. Merger

(Continued from preceding page)

tical demand for this war-important material.

Intermediates Developed

One of the major undertakings of U.S.I.'s laboratories at the present time is the development of new chemical intermediates for use in the manufacture of hormones, amino acids, vitamins, insecticides, and chemo-therapeutics.

To exploit further uses for the staple products and develop new ones, a Technical Sales Development Department was established by U.S.I. with headquarters in a newly constructed laboratory building.

A significant step in the widening of U.S.I.'s chemical activities was its entrance into the field of synthetic resin manufacture with a fairly complete line which includes modified and pure phenolics, alkyds, urea-formaldehydes and ester gums. A line of natural resins was added a short time later.

Two new plants have been built to increase U.S.I.'s resin manufacturing capacity. Both the manufacture and sale of these materials are now conducted by U.S.I.'s Stroock & Wittenberg Division.

Through an active research and development program, coupled with the maintenance of high standards of purity and uniformity, U.S.I. has been able to serve not only virtually every important industry, but to make a substantial contribution to America's fight for freedom as well.

Patent Awarded for Process To Separate Fatty Acids

A method for obtaining fatty-acid fractions relatively rich in stearic and palmitic acids from mixtures such as tallow and garbage grease is the subject of a recent patent.

The method comprises dissolving the fat in a solvent such as 90% methanol, and establishing in the solution a quantity of neutral fat amounting to about 0.5 to 3.5% of the weight of the fatty acids. The solution is then chilled to provide a fraction purer in stearic than in palmitic acid. After this fraction has been removed by filtration, the solution is again chilled to effect crystallization of an eutectic mixture of stearic and palmitic acids. This fraction is also removed by filtration and the solution again chilled to precipitate a fraction richer in palmitic acid than in stearic acid. This final fraction is also removed by filtration.

New Acetone Uses

(Continued from preceding page)

solvent are claimed to produce a dewaxed oil with a pour point of 5° F.

A recent pharmaceutical application of acetone is in dissolving the salt of calabash-curare as a preliminary step in purifying toxiferine. The patent also outlines subsequent steps in the process.

Another new pharmaceutical use for acetone is in the extraction of stings and poison glands of bees. The extract is then evaporated in vacuum at 20° and extracted first with a concentrated alcohol, such as ethanol or methanol, and with 55-65% aqueous alcohol.

New uses for acetone are discovered frequently in the paint, varnish and lacquer industries where this chemical has long been one of the most useful solvents. One recent application is found in a process for a drying oil composition claimed to possess improved hardness and adhesion, as well as greatly reduced wrinkling tendencies. It comprises an unsaturated ketone condensation product of acetone in which tung oil is dissolved.

A rapid, uniform method of producing a luminous coating for electric lamps was discussed recently in which luminescent particles are dissolved in a medium of acetone, nitrocellulose and dimethyl phthlate. Another inventor recommends the addition of colloidal graphite dissolved in acetone and aluminum to lacquer that is to be used on aircraft.

Among the new uses for acetone in organic synthesis is one in which it is used in preparing a pure grade of hydroxylamine hydrochloride. Acetone is reacted with a mixture of nitric acid and hydrochloric acid to produce chloroisonitrosoacetone, which is dissolved in water and reacted with chlorine gas, then hydrolyzed in dilute hydrochloric acid.

The preparation of new emulsifying agents which disperse calcium soap also involves the use of acetone. Lauryl chloride is condensed with a sulphonic acid of para-toluidine or para-chloroaniline in the presence of caustic soda ash or other alkalies and acetone.

An improved method of manufacturing vinyl crotonate makes use of acetone. Acetylene is brought into contact with crotonic acid in the presence of acetone and in the presence of a catalyst at a temperature not exceeding about 50° C.

One of the foremost producers of this basic chemical for many years, U.S.I. offers acetone of highest purity to meet essential needs.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A textile sample dryer is offered which is claimed to perform both drying and conditioning operations on samples of materials in from one to two minutes. Swatches are placed on a wire screen on the disc or rotor attached to the inside of the door of an insulated cabinet, and rotated first with door closed, then opened. **(No. 720)**

U S I

A portable parts-testing unit has been developed which the maker says can subject specimens to any temperature between 165° F. and 100° below zero. Using carbon dioxide as refrigerant, the unit may be attached to a small enclosure built around test parts. A small electric heater provides heat. **(No. 721)**

U S I

A moisture-resistant white pencil tracing cloth has been put on the market which is said to guard against spots from perspiration or moist hands and climatic conditions. It is described as having glass-like transparency and a fine-tooth surface. **(No. 722)**

U S I

A floor cleaning and disinfecting powder is offered which is said to form a non-caustic solution that is effective on floors of wood, tile, terrazzo, cork, linoleum, and rubber. The maker says it rinses readily, does not turn rancid, and is harmless to the skin. **(No. 723)**

U S I

A resin-base paint has been developed which is said to protect the surfaces of metal, wood, and concrete against attack by organic and inorganic acids, alkalis, salts, alcohol, gasoline, oils, and moisture. It is applied by brushing, spraying or dipping. **(No. 724)**

U S I

A salve for treating burns has been developed which is claimed to offer ease of application, relief of pain, acceleration of rate of healing, shortening of disability period, and the prevention of disfiguring scars in many cases. **(No. 725)**

U S I

An acid rust solvent and metal cleaner has been developed for ferrous metals and galvanized sheets. The maker says it will remove oxides quickly in cold solutions without attacking the metal, and that it is fumeless and will not damage clothing, shoes, or hurt hands in any way. **(No. 726)**

U S I

A paint-type marking crayon is offered for use on cold surfaces of steel, lumber, rubber, stone, glass, porcelain and plastics. Colors include white, black, red, blue, green, and yellow. **(No. 727)**

U S I

A flame-proofing material is offered for cloth and fabric that is said to prevent them from igniting even when exposed to actual flames. The maker says it is non-injurious to woolens, cotton or rayon, non-injurious to the skin, and non-poisonous and odorless. **(No. 728)**

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Pure—190 proof, C.P. 96%, Absolute
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*ANSOLS
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Ansol PR

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Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Butyl Oxalate
Ethyl Oxalate

PHTHALIC ESTERS
Amyl Phthalate
Butyl Phthalate
Ethyl Phthalate

OTHER ESTERS
Diatol
*Ethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
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*Curbay B-G
*Curbay Binders
*Curbay X (Powder)
Ethylene
Ethylene Glycol
*Indalone
Nitrocellulose Solutions
Potash, Agricultural
Urethan
*Vacatone

Books of the Industry to Aid You

THE CHEMISTRY OF NATURAL COLORING MATTERS. *Fritz Mayer, Ph.D. Translated and revised by A. H. Cook, Ph.D. 6x9 in., 354 pages. Reinhold Publishing Co. 1943. Price $10.*

This volume is a completely revised text based on the former German work. It surveys the chemical relations known to exist among natural compounds which possess visible color. Only coloring matters which have been characterized by at least analytical figures and significant chemical properties are mentioned. It covers the constitutions, properties and biological relations of the important natural pigments and is recognized as a classic on natural coloring matters. It is one of the American Chemical Society series of scientific monographs. An idea of the contents may be had from the following chapter headings: Carotenoids (Polyene Pigments), Diaroylmethane Compounds, Carbocyclic Compounds, Heterocyclic Compounds, and Compounds Containing Heterocyclic Nitrogen Atoms. A general bibliography, an author index and a subject index add to the value of the work.

THE WAR ON CANCER. *Dr. Edward Podolsky, 5x7½ in., 179 pages. Reinhold Publishing Corp. 1943. Price $1.75.*

Cancer ranks second as the principal cause of death and claims almost 200,000 lives in the United States annually. More, the death rate from cancer has increased 65 per cent since 1900. Cancer is curable. In the past few years notable progress has been made in the detection and treatment of it. These are discussed in this volume. An idea of the contents may be had from the following chapter headings: Biography of Cancer, How Cancer is Detected, Is There a Drug for Cancer? Radium Bombs and Cancer Cells, Healing Rays of Roentgen's Tube, Magnetic Ray Gun, Healing Knife, Refrigeration and Hibernation, Food and Cancer, How to Recognize the Danger Signs in Cancer, Cancer Research. A name index and a subject index add to the value of the book.

MANUAL OF LABORATORY GLASS BLOWING. *E. H. Wright. 5½x9 in., 28 illustrations. 90 pages. Cloth covers. Chemical Publishing Co. 1943. Price $2.50.*

Latest practice in laboratory glass blowing is adequately covered in this useful and interesting volume. A non-technical discussion of gas and glass in the first two chapters helps the operator to understand better the reasons for steps described in later chapters. An idea of the contents may be had from the following chapter headings: Glass, Gas Burners, The Tools, Fundamental Operations, The Splicing Torch, More Advanced Operations and Some Special Operations. The last chapter covers sealing in wires, arc welding platinum electrodes to platinum wires, sealing borosilicate glass to soft glass joints and ground joints.

ORGANIC CHEMISTRY SIMPLIFIED. *Rudolph Macy, Ph.D., 6x9 in., 431 pages, 42 illustrations. Cloth covers. Chemical Publishing Co. 1943. Price $3.75.*

For those engaged in work of a chemical nature who are not able to take a classroom course in organic chemistry, this volume will prove to be most useful for home study. The first part of the book is devoted to an elementary study of atomic structure so that many who have not followed recent developments of chemistry may become familiar with the modern attitude toward the structure of organic compounds. The book is divided into four parts. The first covers the architecture of the carbon atom in chemistry; the second, the architecture of carbon compounds; the third, the classification of carbon compounds; and the fourth, special topics in organic chemistry. All told, 44 chapters, each tersely and clearly written, are used to develop the subject in a graphic and easily understood way.

PACKAGING CATALOG, *1943. 9½x12 in., 634 pages. Cloth covers. Packaging Catalog Corp. Price $2.50.*

An entirely different treatment was adopted on account of war conditions in preparing this issue of the Packaging Catalog. As most of the materials of packaging are under strict government control the editors wisely devoted much attention to limitation orders. Accordingly, regulations and specifications covering packages of metal, glass, paper as well as shipping containers of various kinds are given. Other new matter includes discussion of standardized practices in shipping, types of glass containers, new methods of heat sealing, new kinds of protective coatings and new forms of laminations. In this way the work serves as a manual to help makers and users of packages adjust themselves to war-time conditions. The contents include: Charts and Tables; Package Planning in War Time; Packaging Law; Government Specifications; Cartons and Boxes; Bags; Bottles and Jars; Closures; Cans, Tubes and Vials; Labels, Seals, Tags and Marking Pieces; Plastics; Adhesives; Wrappings; Machinery and Equipment; Shipping; and Displays. All told the work is well done.

Announcements

New bottlenecks for old

A six-page folder distributed by the George S. May Business Foundation, discusses vehicle requirements, man-hour requirements and loading results, and comparative wages and profits under the stimulating subject of new bottlenecks for old. A copy of this folder known as Report 135 may be had for the asking. Another one, No. 136, discusses woman power. This is a 12-page leaflet.

Consulting chemical service

Puzzling problems associated with production should be solved by specially qualified persons, according to the Assn. of Consulting Chemists & Chemical Engineers, Inc. The association acts as a clearing house for consultants. All that is necessary is to state a problem and the association furnishes the name of a consulting chemist or engineer specially qualified to solve it.

Emergency war agencies

A handbook of emergency war agencies to help the public reach the services it needs has been issued by the Office of War Information. Copies may be had from the Government Printing Office, Washington, D. C., for twenty cents each.

Profits through good management

A list of all the published reports of the George S. May Business Foundation, a non-profit research organization, is given in a four-page folder which stresses that the principles of good management apply to every business. A copy will be sent to anyone interested.

Zinc plated steel

Zinc plated steel, a practical alternate for more critical metals, is briefly described in a leaflet which will be sent on request by American Nickeloid Co.

Lignum-vitae

Many diversified and some heretofore unknown applications of lignum vitae as well as potential uses in the post-war period are adequately described in an 8-page folder issued by the Lignum-Vitae Products Corp.

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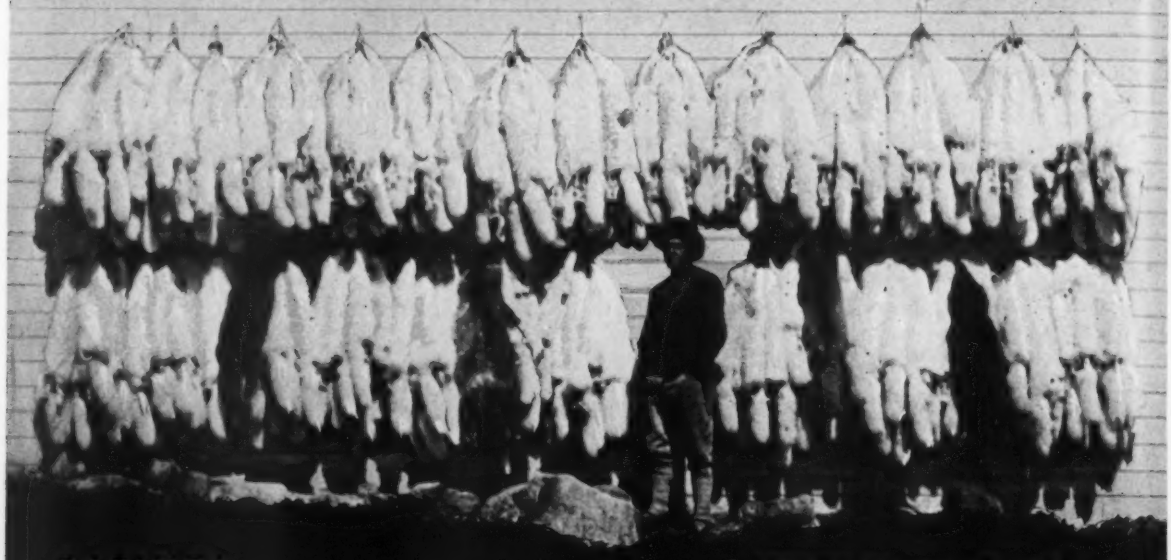

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NEWS and EVENTS

Cosmetic manufacturers seek aid on dime items

The situation in regard to the dime items which has proven such a bugbear is still very much up in the air as it seems impossible to reach a decision that will be satisfactory to all concerned.

A proposed OPA order designed to ease the squeeze on these manufacturers through raising their price ceilings was brought up at a conference held recently at the Waldorf-Astoria.

It was stated that higher costs, particularly for containers and closures, together with the tight supply situation on bottles in view of the 65 per cent quota recently put into effect by the WPB made it extremely difficult if not impossible for manufacturers to continue to supply the 10-cent items to the syndicate and variety stores at the present price levels.

However, even if the producers were granted permission to increase their prices there was a limit to what the syndicate stores would and could pay for items in the 10-cent bracket. An increase from the present level of 72 cents a dozen, it was said, would bring the items into the 15-cent category. This would conflict with the price administration ruling. Thus it can be seen that this is one of the toughest problems in the cosmetic field and at the moment has reached an impasse.

Leaders of drug trade to serve on OPA's Nat'l Advisory Com.

Eighteen leaders of the wholesale and retail drug trade have been appointed by the Office of Price Administration to serve on its National Industry Advisory Committee on the Distribution of Drugs, Cosmetics and Health Supplies.

The committee will cooperate with OPA in the solution of price problems of firms engaged in distribution of drug and cosmetic products, and rubber drug sundries, which constitute about 50 per cent of the entire volume of sales through retail drug channels.

The committee was recruited from the trade on the basis of size and type of operation, geographical location, and ability, in order to provide a representative advisory group.

Those named to represent independent retail druggists on the committee are: Keith K. Keller, Minneapolis, Minn.; Frederick D. Lascoff, New York, N. Y.; Martin E. Adamo, Boston, Mass.; H. L. Chichester, Macon, Ga.; Thomas Roach, Oklahoma City, Okla.; and J. P. Scott, Lewiston, Idaho.

Representing the chain stores are: J. Frank Gallaher, Dayton, Ohio, Nate S. Shapiro, Detroit, Mich.; Horace A. Taylor, Louisville, Ky.; and John G. Bell, Washington, D. C.

Wholesale druggists on the group are: B. H. Badanes, New York; A. Kiefer Mayor, Indianapolis, Ind.; F. A. Domigan, Columbus, Ohio.

Four additional members representing other retailers of drug products are: Lee Bertisch, Chicago, department stores; L. S. Shapiro, Chicago, mail order house; J. B. George, New York City, variety stores; and George W. Wallerich, Chicago, Ill., physicians' supply houses.

The committee will be assisted in its advisory services by representatives of various trade associations who may attend committee meetings upon written invitation of the Price Administrator or the Price Executive. Among such trade association executives are: John W. Dargavel, National Association of Retail Druggists, Chicago, Ill.; Fred J. Griffiths, National Association of Chain Drug Stores, New York; Dr. E. F. Kelley, American Pharmaceutical Association, Washington, D. C.; Fred B. Hovey, American Surgical Trade Association, Chicago, Ill.; Dr. E. L. Newcomb, National Wholesale Druggists' Association, New York, N. Y.; and R. C. Schlotterer, Federal Wholesale Druggists' Association, New York.

California legislature gives funds for herb cultivation program

The California Polytechnic School, Los Angeles, is launching a perfume and medicinal herb cultivation program, funds for which have been provided to the extent of $35,000 by the state legislature through a bill enacted by the recent session in Sacramento.

Karoff Creations buys Lucretia Vanderbilt

Karoff Creations, Inc., have announced the purchase of Lucretia Vanderbilt, Ltd., manufacturers of the perfume line of the same name, from McKesson & Robbins.

On July 28th, Karoff Creations entertained at a cocktail party to announce this acquisition, and the opening of larger and more modern offices and showrooms at 396 Fifth Ave., New York.

For the present the Lucretia Vanderbilt line will contain the same products as formerly, but it is planned to add a complete treatment as of Jan. 1, 1944.

Robert Karoff is president of the company and Arthur Karoff, secretary.

American Home Products acquires new subsidiaries

American Home Products Corp. has completed negotiations for the acquisition of the Gilliland Laboratories, Marietta, Pa., the Belle Center Creamery and Cheese Co. and its affiliate, O.M.S. Corp., Ohio. The personnel and policies of the subsidiaries will remain unchanged, according to Alvin G. Brush, chairman of American Home Products Corp. Dr. E. K. Tingley will remain as president of Gilliland Laboratories and Walter L. Lamb, who established the two Ohio concerns in 1934, will continue in same capacity.

Dow Chemical Co. receives sixth Army-Navy "E" award

The employees and management of the Great Western Division of the Dow Chemical Co.'s Pittsburg, Calif., plant were awarded the Army-Navy "E" on July 28th. The award "for high achievement in the production of war materials" was the sixth such honor to go to various operations in the domestic production set-up of the Dow company.

Interchemical moves to Empire State Building

Interchemical Corp. and the administrative offices of several operating divisions and subsidiaries moved from 75 Varick St. to the Empire State Building, New York, N. Y., on August 1st.

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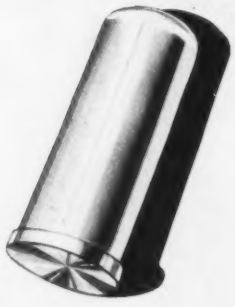

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WPB endorses manufacturers' glass-salvage drive

W. F. Deveneau, director of the Container Re-Use Campaign, sponsored by the Containers Division of the War Production Board, is authority for the statement that salvaging glass containers will soon be a matter of sheer necessity instead of option.

The appeal to all manufacturers sent out by Max C. Fogel, chairman of the Glass Salvage Committee of the National Beauty and Barber Manufacturers' Association, has received Mr. Deveneau's wholehearted approval.

"Your letter is most timely" said Mr. Deveneau, "and it is hoped your membership will actively participate for unless concerted efforts are made to re-use all existing containers, there is every possibility that the time may soon come when manufacturers will be unable to market their products because they will be unable to secure necesary containers.

"Following considerable study of the subject, the Containers Division is just about ready to start a Shipping Container Re-Use Campaign, directed alike to manufacturers, wholesalers and retailers to carefully handle, open and facilitate the re-use of every existing container, returning them to the original shippers wherever possible, otherwise disposing of them to dealers in second hand containers for resale to manufacturers who will re-use them. While your program is aimed at the re-use of glass containers, this Division is equally interested in all types and sizes of containers, whether made of paper, paperboard, wood, glass or metal, for their re-use is absolutely essential at the present time."

Mr. Fogel's Committee is drafting plans for salvaging and collecting containers of all kinds paralleling the program of the War Production Board. The slogan will be "Save Re-Usable Containers." Mr. Fogel points out that while all glass containers are not reusable, if they cannot be washed, sterilized and re-used, they can still be used to make up scrap glass, needed for the manufacture of new glass.

California Flavoring Extracts Assn. hears talk on Army ration kits

The Flavoring Extracts Assn. of California held its monthly meeting July 15, at the Los Angeles Athletic Club, president Charles S. Marston, presiding. An exceptionally interesting speaker was Lt. Colonel Townsend of the U. S. Veterinary corps who spoke on foods used by men in the service. Part of his talk concerned the various types of rations provided and the showing of actual samples of these foods. Among the different packages for men serving in various climates and altitudes was a sample of the rations dropped from planes to men forced to take to a lifeboat or raft, another for flyers and so on. Those present were privileged to partake of some of these samples. The speaker explained why certain rations were used in certain places. He also discussed the subject of flavoring, pointing out the importance of taste. "We try to get as much flavor into the food as possible," he said. "This is of very definite advantage. There is, for one thing, a psychological value in taste which must never be discounted." Many questions were asked and answered following the address.

Fred Milner of the California Department of Agriculture, spoke briefly as a special guest.

Evelyn Westall controls Parfums Hartnell in Western Hemisphere

The business in the western hemisphere of Parfums Hartnell, Inc., of London, is now owned solely by Evelyn Westall of the Evelyn Westall Co., New York, N. Y. W. J. Overhamm is the distributor with headquarters at 745 Fifth Ave., New York, N. Y. In the last six months sales of the products of the company have been most encouraging.

Sperti, Inc., to put on the market SRF—skin respiratory factor

Sperti, Inc., marketers of a burn ointment through drug channels, is putting out a new product, SRF or skin respiratory factor.

Dr. George Sperti of Sperti, Inc., is scientific director of Institutum Divi Thoma, a research institution, Cincinnati, which uses its inventions to help pay for its pure research conducted at its laboratories at Cincinnati and Palm Beach.

Manufacturer directed to warn users of preparation

The Dearborn Supply Co., Chicago, manufacturer of "Mercolized Wax Cream," containing ammoniated mercury, has been directed to warn against indiscriminate use of the preparation. The order provides, however, that such an advertisement need only contain the statement, "Caution: Use only as directed."

Vick Chemical Co. opens mint oil plant in California

A mint oil distillation plant of the Vick Chemical Co. is in operation at Shafter, Calif. The company is one of the largest consumers of menthol in the country.

Sun Tube Corp. now controlled completely by Bristol-Myers Co.

Controlling stock of the Sun Tube Corp., Hillside, N. J., has been acquired by the Bristol-Myers Co., also of Hillside. The plant of the Sun Tube Corp. adjoins that of the Bristol-Myers Co. and officials of the latter have been interested in the company since its organization.

BIMS of Boston hold "Indoor Outing" at University Club

The BIMS of Boston tried something new July 22nd which they called an "Indoor Outing." Everyone voted the new idea a complete success.

The "Outing" was held at the University Club. This was a particularly fortunate choice as the day turned out to be a very rainy one, the first they have encountered since their organization.

Badminton, squash, swimming, bowling, billiards and cards were the order of the day, plus a gala feast in the evening.

The prizes were won by William Ackley, Ed Handschumacher, Jack Nielson and Pete Niles.

The party was voted the most successful that the Boston BIMS have ever held. It is hoped that if the ban on gasoline is eased in New England that a golf tournament can be held in the Fall.

Philip C. Sayres elected to Board of Bristol-Myers Co.

Philip C. Sayres, secretary-treasurer of Bristol-Myers Co., was elected a member of the Board of Directors at the annual stockholders' meeting. Mr. Sayres joined the Bristol-Myers Co. in 1931 as assistant to the president and has served the company as comptroller and assistant treasurer.

Aromatic Products represented by S. L. Abbot Co. in Calif.

Aromatic Products, Inc., New York, N. Y., announces that the S. L. Abbot Co. is now its representative in both San Francisco and Los Angeles, Calif. In San Francisco the offices are located at 135 King St., and in Los Angeles, at 800 Santa Fe Ave.

FTC charges Isabelle Beautetics with misrepresentation

R. H. Tillson, trading as Isabelle Beautetics Co., and as R. H. Tillson Co., engaged in selling the cosmetic "Velskin," is charged in a complaint issued by the Federal Trade Commission with misrepresenting the stain removing and skin cleansing properties of the preparation.

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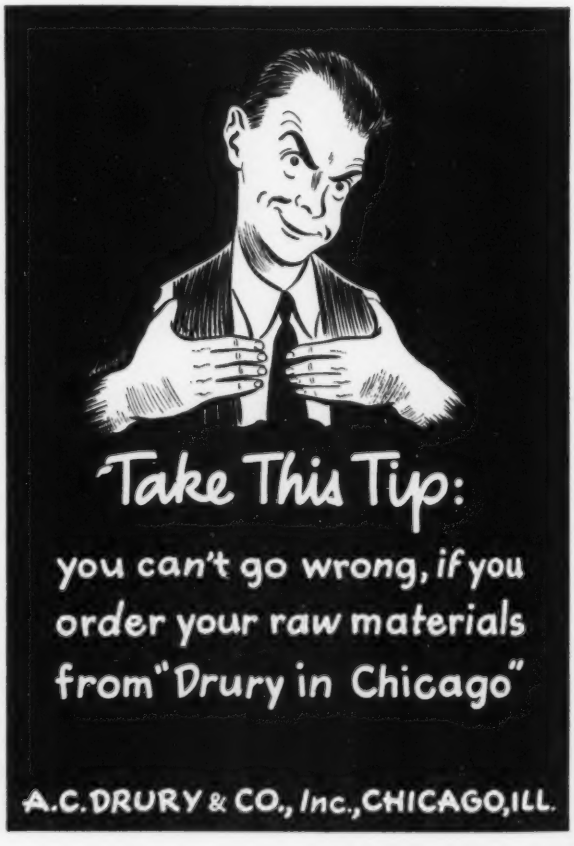

50th anniversary of the arrival in Belgian Congo of Pierre Danco

On August 5th Gerard J. Danco, president of Gerard J. Danco, Inc., gave a luncheon at the Brussels Restaurant, 26 East 63rd Street, New York City, in celebration of the 50th anniversary of the first arrival in the Belgian Congo of Pierre Danco, vice-president of Gerard J. Danco, Inc. Those attending were:

His Excellency, Georges Theunis, Minister of State, Ambassador Extraordinary of Belgium on special mission to the United States; Max Horn, Counsellor of the Belgian Congo Government; Frans Van Cauwelaert, Speaker of the House of Representatives of Belgium; Charles Hallaert, Consul General of Belgium; Emile Rosier, Consul General of Belgium, General Secretary of the Belgian Congo Purchasing Commission; Fernand Seynaeve, Consul General, Deputy Commercial Councelor, Belgian Embassy, U. S. A.; Charles Leonard, Consul, Chancellor of the Belgian Embassy in the U. S. A.; Guy Daufresne de la Chevalerie, Consul of Belgium; J. C. Van Essche, Belgian Congo Purchasing Commission; Dr. Georges P. Lambrichts, Medical Councelor of the Belgian Congo Purchasing Commission; Rev. Mgr. P. de Strijcker, Director, American College, University of Louvain; René Hislaire, Manager of the Belgian Broadcasting Commission, Editor *Belgium;* Henri Wild, Esq., Assistant Manager of the Banque Belge pour l'Etranger (Overseas), Ltd.; Captain Leon A. Danco, United States Marine Corps; William Lambert, Editor, AMERICAN PERFUMER; Thomas R. Farrell, Editor, *Drug & Cosmetic Industries;* William Gets, New York; Leon A. Danco, Jr., Quartermaster, Coast Guard, son of Captain Danco; Pierre Danco and the host, Gerard Danco.

Mr. Hallaert acted as master of ceremonies and proposed a toast to Mr. Pierre Danco.

Various changes made in the personnel of Monsanto

According to an announcement August 2nd by the Monsanto Chemical Co., William M. Rand, vice-president and general manager of the Merrimac Division of the company has been elected to the executive committee of the company. His headquarters will be in St. Louis, as of Nov. 1, when the change goes into effect.

Daniel S. Dinsmoor, assistant general manager of the organic chemicals Division in St. Louis, was elected a vice-president and will succeed Mr. Rand in the Merrimac Division.

Julius A. Berninghaus, general manager of the organic chemicals Division, will retire Nov. 1 at the age of 65, and will be succeeded by Osborne Bezanson, a vice-president, who has been general manager of the company's Texas Division with headquarters in Texas City, Tex.

Gloria Bristol establishes laboratories in Beverly Hills

Gloria Bristol, the widely known cosmetologist who has conducted salons in some of the world's largest cities, has established Gloria Bristol Laboratories in Beverly Hills, Calif., for the manufacture of cosmetics for drug stores, specialty shops and department stores.

Ellen Perry, Barbara Gould, Ltd. visiting Barbara Gould in N.Y.

Miss Ellen Perry, in charge of education, publicity and promotion of Barbara Gould, Ltd., Montreal, Canada, was in New York for a few days the latter part of July to consult with Mr. Paul Douglas, vice-president and general manager of Barbara Gould.

In the course of her travels Miss Perry covers the entire territory of Canada once a year. Miss Perry tells us that in Canada the restrictions on the packaging of cosmetics is more strict than here; only four shades of lipsticks are allowed and only two sizes of powder boxes.

T. B. Kleckner, manager and merchandizing manager, New York Division, McKesson and Robbins, Inc. (Left) autographs copy of "Your New Position as a Drug Clerk" for presentation to Harry Hessen, new clerk of the Rival Drug Co., Fordham Road, New York, while Herman Goldberg, proprietor, looks on. The book, written by Theodore N. Beckman and Edward E. Garrison, School of Business, Ohio State University, is being distributed by McKesson representatives throughout the country as one means of assisting in the practical training of new and inexperienced retail drug store clerks.

Dr. Eric C. Kunz hononary vice-chairman Bible Week

Dr. Eric C. Kunz, president of Givaudan-Delawanna, Inc., New York, N. Y., has accepted the designation of Honorary Vice-chairman of National Bible Week for 1943, representing the essential oil industry.

L. J. Huener elected asst. secy. Bristol-Meyers

L. J. Huener was elected assistant secretary of Bristol-Myers Co., at a meeting of the Board of Directors.

Salesmen's Assn. holds golf tournament

The Salesmen's Association of the American Chemical Industry held a golf tournament at the Bonnie Country Club, Larchmont, N. Y., on July 15th. The winners were:

Members Low Gross—Class A—Charles F. Alexander, of L. Sonneborn & Sons, Inc.;

Members Low Gross—Class B—R. M. Stevenson, of Givaudan-Delawanna, Inc., New York, N. Y.;

Members Low Gross—Class C—P. W. Hiller, of Innis, Speiden & Co., New York, N. Y.;

Members Low Net—Class A—Russ Boland, of Topics Publishing Co.;

Members Low Net—Class B—J. R. Eldridge, of the Virginia Smelting Co., New York, N. Y.;

Members Low Net—Class C—George F. Smith;

Guests Low Gross—C. W. Benedict;

Members Kickers—C. W. Frost, of the Prior Chemical Corp.;

Members Kickers—H. Cottrell, Innis, Speiden & Co.;

Guests Low Net—H. M. Schulman, of National Washine Sands;

Members Kickers—F. Berggren, of Oldbury Electro-Chemical Co.;

Guest Kickers—C. L. Weirich, of C. B. Dolge Co.;

High Gross and Dinner Door Prize—G. V. Mutchler, of McKesson & Robbins, Inc.;

The first 13 prizes were $5 worth of War Stamps and the dinner door prize consisted of a $25 War Bond.

Vadsco firms operate as Universal Laboratories

Universal Laboratories, Inc., is the corporate name under which all the subsidiaries of Vadsco Sales Corp. are now operating. Universal Laboratories will continue to manufacture, sell and distribute and package for its various subsidiaries.

John Glossinger is president of Universal, Henry W. Wittner is vice-president and treasurer, and Joseph M. Jaffin is secretary of the company.

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Obituaries

John J. Pollock

John J. Pollock, vice-president and sales manager of Volupte, Inc., manufacturer of compacts and cigarette cases and vice-president of The Herb Farm Shop, Ltd., an affiliate, died July 26th in the New York Hospital, after a brief illness.

John J. Pollock

Mr. Pollock was born in New York 50 years ago. He received his A.B. from Cornell University in 1914. During the first World War he served on the staff with the Food Administration.

Mr. Pollock has been well known in the cosmetic industry for 20 years and was on the membership committee of the Toilet Goods Association. His loss will be felt deeply by his many friends in the industry.

He is survived by two daughters, Jill and Winifred Pollock.

Eugene Schuck

Eugene Schuck, for more than two years past the chief chemist and plant superintendent of the Miller Soap Products Co., Inc., Los Angeles, died at his home in that city July 10, at the age of 65. Mr. Schuck was widely known in the industry. He had several soap formulas to his credit and had been a consulting engineer on the construction of soap manufacturing plants in the United States, Europe and South America. He is survived by his widow and a son and daughter. John Black of the Miller force succeeds Mr. Schuck.

Byron B. Gilmer

Byron B. Gilmer, a director and regional vice-president in charge of the Southwest District of McKesson & Robbins, Inc., died at the age of 66 in Houston, Texas, on August 2nd.

When the present McKesson organization was started in 1928, the Southern Drug Co. of Houston which Mr. Gilmer had founded and of which he was president, was among the first to be incorporated into the national wholesale drug concern. During 1937 to 1938, Mr. Gilmer served as honorary president of the National Wholesale Drug Assn.

Mr. Gilmer is survived by his widow Mrs. Edna Phillips Gilmer, and two children, Captain L. D. Gilmer, U.S.A., now serving overseas, and Mrs. Edna Nelson, of Dallas, Texas.

Edwin Sefton

Edwin Sefton, executive and director of Harriet Hubbard Ayer, Inc., died June 28th at the home of his sister, Mrs. Lillian Sefton Dodge, of Sefton Manor, Mill Neck, L. I. Mr. Sefton had been connected with the company for over 25 years.

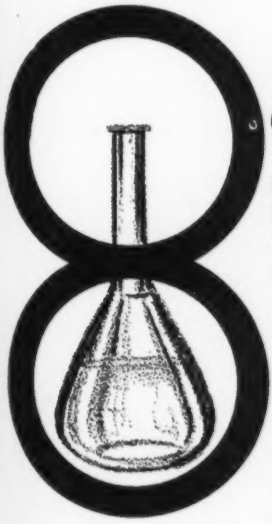
Surviving besides Mrs. Dodge, are his daughter, Mrs. Charles Wayne Kerwood and another sister, Mrs. Zenas D. Hallett.

Lucien N. Brunswig

Lucien Napoleon Brunswig, pioneer wholesale druggist, founder and president for many years of the Brunswig Drug Co., died July 17th at his home in Los Angeles, Calif., at the age of 88.

Mr. Brunswig had been in the drug business ever since he came to this country in 1871 from Alsace, France, his birthplace.

He is survived by his widow, Marguerite Wogan Brunswig, four daughters and one son.



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Import of Oils Outlook Brightens

RAW MATERIALS, in so far as essential oils and aromatic chemicals were concerned, have been of typical summer character, yet international developments served to lift the hopes of many with regard to replacements of a great number of articles that have been completely shut off for more than a year.

It is extremely difficult to make predictions in view of swiftly moving developments in the war picture. A particularly interesting development, one whose shadow seems to presage events to come, indicates the U. S. Government will probably arrange for the importation, under its auspices, of certain Moroccan products.

There is a strong possibility that numerous Sicilian products, including lemon oil, orange, bergamot and several others, will soon begin to flow into this market, especially in view of the swiftly moving Allied campaign in that area.

A great many articles showed signs of weakening as reports persisted about the trade to the effect that import restrictions may soon be relaxed because of improved shipping conditions.

CASTOR OIL RESTRICTIONS EASED

As castor oil consumers continued to press their demands for increased allocations, advices from Washington indicated a relaxation of restrictions was on its way and might come in August. Federal Food Administration, it was learned, is considering increasing August allocations by five to ten per cent. Trade in gum arabic was quiet throughout the period as rumors continued in certain directions regarding an early relaxation in import restrictions. The restrictions were imposed at a time when steamer space was scarce. With an increasing number of boats available and in view of a decided reduction in the number of sinkings, there was a growing feeling that a great many more goods would soon be made available.

GLYCERINE OUTLOOK BRIGHTER

Some glycerine refiners, it is pointed out, have not been moving their production as rapidly as expected with the result that an accumulation of material has been noted. The reduction in the demand is attributed to Government regulations, and should the war suddenly come to an end, refiners would probably face the experience of reducing substantial inventories. Canada, it is said, has about completed Great Britain's requirements, and there is a strong possibility of fair-size quantities reaching this market in return for the material that was exported to Canada last year. In presenting the over-all picture in glycerine, trade factors agreed the situation was unquestionably easier now than since the war started.

While the situation in mint oils was highly confused over the greater part of the period under review, a notice to members of the industry by OPA, pointing to the seriousness of the matter, indicated that a definite move would soon be taken to ceil prices in the country at levels that would permit local dealers to resume business in both spearmint and peppermint.

CEILING ON PEPPERMINT ASKED

A development that tended to cloud the situation, however, was the announcement coming out of Detroit which indicated Michigan growers had appealed to OPA for a ceiling of $7.50 on peppermint and $5 on spearmint. OPA has been studying a plan to ceil prices in the country at $5 per pound on peppermint and $3 on spearmint.

Manufacture of various compounds resulted in a fairly brisk call for a number of imitation oils. If the demand for essential oils and aromatic chemicals on the part of toilet goods manufacturers should fall off during the next few months, it will largely be due to difficulties now being encountered in securing containers.

LANOLIN VERY SCARCE

Lanolin, which normally enjoys a heavy demand for the manufacture of lotions and various toilet preparations, remained very scarce over the past month. Toward the close of the period, makers indicated the article would shortly be placed under complete allocation. Under the circumstances surrounding the general position, it was generally feared that most of the material would be allocated to pharmaceutical manufacturers and that toilet goods manufacturers would only be able to obtain very limited lots, if any.

BEANS MORE PLENTIFUL

Demand for vanilla beans was fairly active at times. Bourbon beans were scarce. Virtually all available lots of Tahiti beans had been taken up on spot, but toward the close there were reports of fresh parcels having arrived from the Island. Trade factors reported little change in the situation in so far as shipments of Bourbon beans from Madagascar were concerned. No progress had been made in securing a steamer, although all the necessary arrangements, including an extension of import licenses and letters of credit, have been completed. Because of good sales of Mexican beans, local houses found it impossible to build up reserve stocks.

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Almond Bit, per lb.	3.50@	4.00
S. P. A.	4.75@	5.10
Sweet True	1.85@	2.35
Apricot Kernel	.45@	.50
Amber, rectified	1.35	Nom'l
Angelica Root	125.00@	150.00
Anise, U. S. P.	3.85	Nom'l
Imitation	2.00@	2.10
Aspic (spike) Span.	4.00@	4.80
Avocado	.90@	.95
Bay	1.75@	2.50
Bergamot	25.00	Nom'l
Brazilion	10.00@	
Artificial	4.00@	9.25
Birch, sweet	2.40@	4.25
Birchtar, crude	2.25	Nom'l
Birchtar, rectified	4.25	Nom'l
Boise de Rose	5.00	Nom'l
Cade, U. S. P.	1.35@	1.50
Cajeput	2.00@	2.75
Calamus	22.50@	35.00
Camphor, "white," dom.	.30@	.35
Cananga, Java, native	10.50@	11.25
Rectified	12.00@	13.00
Caraway	15.50@	17.50
Cardamon	30.00@	35.00
Cassia, rectified, U. S. P.	12.00	Nom'l
Cedar leaf	1.05@	1.10
U. S. P.	1.55@	1.60
Cedar wood	.65@	.80
Celery	24.00@	26.00
Chamomile	150.00	Nom'l
Cinnamon	10.50@	32.00
Citronella, Ceylon	1.15@	1.35
Java	2.75@	3.25
Cloves, Zanzibar	1.75@	2.00
Copaiba	.80@	.85
Coriander	26.50@	28.00
Imitation	8.00@	14.00
Croton	3.00@	3.75
Cubebs	4.75@	5.25
Cumin	8.50@	10.00
Dillseed	8.00@	8.50
Erigeron	2.15@	2.50
Eucalyptus	1.02@	1.07
Fennel, Sweet	3.25@	4.00
Geranium, Rose, Algerian	15.50@	16.00
Bourbon	14.00@	16.00
Turkish	4.95@	5.50
Ginger	22.00@	23.00
Guaiac (Wood)	5.00@	6.10
Hemlock	1.25@	1.35
Substitute	.55@	.60
Juniper Berries	15.00@	18.00
Juniper Wood, imitation	.75@	.80
Laurel	5.00	Nom'l
Lavandin	7.75@	8.25
Lavender, French	10.00@	12.00
Lemon, Calif.	3.25@	
Lemongrass	1.10@	1.35
Limes, distilled	6.25@	7.75
Expressed	11.00@	11.75
Linaloe	3.75@	4.10
Lovage	95.00	Nom'l
Marjoram	5.50@	7.00
Neroli, Bigarde, P.	340.00	Nom'l
Petale, extra	325.00	Nom'l
Olibanum	5.00@	5.75
Opopanax	3.00	Nom'l
Orange, bitter	5.00@	6.00
Brazilian	1.25@	1.50
Calif., exp.	1.45@	2.25
Orris Root, abs. (oz.)	135.00@	
Artificial	36.00@	40.00
Pennyroyal, Amer.	2.65@	2.80
European	2.50@	3.00
Peppermint, natural	5.50@	5.65
Redistilled	5.85@	6.00
Petitgrain	1.75@	2.25
Haitian	2.25@	
Pimento	4.00@	7.75
Pinus Sylvestris	4.25@	5.00
Pumillonis	4.25@	4.80
Rose, Bulgaria (oz.)	25.00@	32.00
Synthetic, lb.	45.00@	55.00
Rosemary, Spanish	1.75@	3.00
Sage	8.25@	9.00
Sage, Clary	45.00	Nom'l
Sandalwood, East India	5.60@	6.25
Sassafras, natural	2.00@	2.15
Artificial	1.75@	2.25
Snake root	10.00@	12.75
Spearmint	3.35@	3.50
Thyme, red	2.60@	3.25
White	3.25@	5.00
Valerian	30.00	Nom'l
Vetivert, Java	32.00@	35.00
Wintergreen	5.25@	8.50
Wormseed	3.10@	3.50
Ylang Ylang, Manila	38.00	Nom'l
Bourbon type	18.00@	20.00

TERPENELESS OILS

Bay	2.75@	3.00
Bergamot	49.00	Nom'l
Grapefruit	65.00@	
Lavender	28.00	Nom'l
Lemon	40.00@	55.00
Lime, ex.	100.00@	150.00
Distilled	50.00@	67.00
Orange, sweet	100.00@	155.00
Peppermint	10.00@	14.00
Petitgrain	3.50@	4.00
Spearmint	5.00@	6.00

DERIVATIVES AND CHEMICALS

Acetaldehyde 50%	1.90@	2.75
Acetophenone	1.90@	2.00
Alcohol C 8	7.50@	10.00
C 9	14.00@	18.00
C 10	7.75@	12.00
C 11	11.50@	15.00
C 12	7.20@	8.50
Aldehyde C 8	22.50@	28.00
C 9	30.00@	32.00
C 10	24.00@	25.50
C 11	22.00@	26.00
C 12	30.00@	35.00
C 14 (so called)	6.00@	7.25
C 16 (so called)	8.25@	9.00
Amyl Acetate	.50@	.75
Amyl Butyrate	.90@	1.10
Amyl Cinnamate	4.50@	5.80
Amyl Cinnamate Aldehyde	2.75@	5.00
Amyl Formate	1.00@	1.75
Amyl Phenyl Acetate	3.75@	4.00
Amyl Salicylate	.80@	.93
Amyl Valerate	2.00@	2.75
Anethol	2.25@	3.00
Anisic Aldehyde	3.75@	4.00
Benzophenone	1.15@	1.30
Benzyl Acetate	.70@	1.00
Benzyl Alcohol	.75@	1.00
Benzl Benzoate	1.10@	1.65
Benzyl Butyrate	3.25	Nom'l
Benzyl Cinnamate	6.00@	
Benzyl Formate	3.75	Nom'l
Benzyl-Iso-eugenol	10.25@	11.25
Benzylidenacetone	2.25@	3.40
Borneol	1.80	Nom'l
Bornyl Acetate	2.00	Nom'l
Bromstyrol	5.00	Nom'l
Butyl Acetate	.11@.	14½
Cinnamic Acid	3.75@	4.50
Cinnamic Alcohol	3.25@	4.00
Cinnamic Aldehyde	1.65@	1.75
Cinnamyl Acetate	10.40	Nom'l
Cinnamyl Butyrate	12.00@	14.00
Cinnamyl Formate	10.00@	13.00
Citral, C. P.	3.75@	4.15
Citronellol	6.25@	6.85
Citronellyl Acetate	4.00	Nom'l
Coumarin	3.00@	3.50
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Dimethyl Anthranilate	4.55@	5.00
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Ethyl Anthranilate	5.75@	7.50
Ethyl Benzoate	.90@	1.15
Ethyl Butyrate	.75@	.90
Ethyl Cinnamate	3.60@	4.50
Ethyl Formate	.60@	1.00
Ethyl Propionate	.80	Nom'l
Ethyl Salicylate	.90@	1.00
Ethyl Vanillin	6.50@	6.75
Eucalyptol	2.75@	3.00
Eugenol	2.85@	3.35
Geraniol, dom.	3.00@	3.85
Geranyl Acetate	3.50@	4.00
Geranyl Butyrate	4.00@	5.75
Geranyl Formate	4.25@	6.25
Heliotropin, dom.	3.40@	4.00
Hydrotopic Aldehyde	15.00@	18.00
Hydroxycitronellal	7.75@	10.00
Indol, C. P.	27.00@	32.00
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Iso-butyl Benzoate	2.75@	3.00
Iso-butyl Salicylate	2.70	Nom'l
Iso-eugenol	4.00@	4.85
Iso-safrol	3.00	Nom'l
Linalool	7.35@	7.75
Linalyl Acetate 90%	7.50@	10.00
Linalyl Anthranilate	15.00@	
Linalyl Benzoate	10.50@	
Linalyl Formate	9.00@	12.00
Menthol, Japan	16.00	Nom'l
Chinese	16.00	Nom'l
Synthetic	15.75	Nom'l
Methyl Acetophenone	1.60@	2.00
Methyl Anthranilate	2.80@	3.00
Methyl Benzoate	.70@	1.10
Methyl Cellulose, f.o.b. shipping point	.60	Nom'l
Methyl Cinnamate	3.50@	4.00
Methyl Eugenol	3.50@	6.75
Methyl Heptenone	3.25@	
Methyl Heptine Carbonate	45.00	Nom'l
Methyl Iso-eugenol	5.85@	10.00
Methyl Octine Carbonate	24.00@	30.00
Methyl Paracresol	2.50	Nom'l
Methyl Phenylacetate	3.50@	4.00
Methyl Salicylate	.35@	.38
Musk Ambrette	4.25@	9.00
Ketone	4.40@	9.70
Xylene	1.65@	2.50
Neroline (ethyl ether)	2.00@	3.15
Paracresol Acetate	2.50	Nom'l
Paracresol Methyl Ether	2.60@	3.50
Paracresol Phenyl-acetate	6.50@	8.50
Phenylacetaldehyde 50%	3.00@	3.75
100%	4.50@	5.00
Phenylacetic Acid	3.25@	3.70
Phenylethyl Acetate	3.85@	5.00
Phenylethyl Alcohol	2.50@	3.00
Phenylethyl Anthranilate	16.00@	
Phenylethyl Butyrate	6.50@	10.00
Phenylethyl Propionate	5.00@	6.50
Phenyl Formate	12.50@	18.00
Phenyl Valerianate	16.00@	17.50
Phenylpropyl Acet.	10.00	Nom'l
Santalyl Acetate	20.00@	22.50
Skatol, C. P. (oz.)	5.35@	6.00
Styralyl Acetate	2.50@	3.00
Styralyl Alcohol	9.25@	12.00

Terpineol, C. P.	.50@	.75
Terpinyl Acetate	.90@	1.00
Thymene	.45@	
Thymol	2.25@	5.25
Vanillin (clove oil)	2.60	Nom'l
(guaiacol)	2.35	Nom'l
Lignin	2.35	Nom'l
Vetivert Acetate	25.00	Nom'l
Violet Ketone Alpha	18.00	Nom'l
Beta	15.00	Nom'l
Methyl	6.50	Nom'l
Yara Yara (methyl ester)	1.95@	2.25

BEANS

Angostura	2.50@	3.00
Tonka Beans, Surinam	.70@	.95
Vanilla Beans		
Mexican, whole	9.50@	10.00
Mexican, cut	8.35@	8.75
Bourbon, whole	8.50@	9.00
South American	10.00@	
Tahiti	4.00@	4.25

SUNDRIES AND DRUGS

Acetone	.8½@	.09
Almond meal	.25@	.27
Ambergris, ounce	17.00@	20.00
Ambrette seed	.18@	
Balsam, Copaiba	.50@	.54
Peru	1.30@	1.50
Beeswax, bleached, pure		
U. S. P.	.57	Nom'l
Yellow, refined	.52½	Nom'l
Bismuth, sub-nitrate	1.20@	1.22
Borax, crystals, carlot ton	55.50@	58.00
Boric Acid, U. S. P., cwt	6.95@	7.55
Calamine	.18@	.20
Calcium, phosphate	.08@	.08¾
Phosphate, tri-basic	.09@	.10
Camphor, domestic	.68@	.83
Castoreum	13.00@	26.00
Cetyl Alcohol	1.75	Nom'l
Pure	2.25	Nom'l
Chalk, precip.	.03½@	.06½
Cherry Laurel Water, carboy	5.75@	6.25
Citric Acid	.21	Nom'l
Civet, ounce	28.00@	49.00
Clay, colloidal	.07@	.15
Cocoa Butter, lump	.25½	.27
Cyclohexanol (Hexalin)	.30@	.50
Fuller's Earth, ton	15.00@	33.00
Glycerine, C. P., drums	.18¼@	.18¾
Gum Arabic, white	.42@	.45
Amber	.17@	.17¾
Gum Benzoin, Siam	4.00@	4.25
Sumatra	.65@	.85
Gum Galbanum	1.80@	2.00
Gum Myrrh	.60@	.65
Henna, pwd.	.30@	.35
Kaolin	.05@	.07
Labdanum	3.25@	5.00
Lanolin, hydrous	.35@	.36
Anhydrous	.36@	.37
Magnesium, carbonate	.09@	.10¾
Stearate	.24@	.27
Musk, ounce	50.00	Nom'l
Olibanum, tears	.25@	.30
Siftings	.11@	.13
Orange Flower Water, gal.	2.00@	2.50
Orris Root, African, pwd.	1.05@	1.20
Paraffin	.06¼@	.09
Peroxide	1.10@	1.75
Petrolatum, white	.06¼@	.08½
Quince Seed	1.75@	2.00
Rice Starch	.09@	.10
Rose Leaves, red	5.45@	5.75
Rose water, gal.	6.50@	8.00
Rosin M. per cwt.	4.56@	
Salicylic Acid	.35@	.40
Saponin	2.00@	2.50
Silicate, 40°, drums, works,		
100 pounds	.80@	1.20
Soap, neutral, white	.20@	.25
Sodium Carb.		
58% light, 100 pounds	1.35@	2.35
Hydroxide, 76% solid, 100 pounds	2.60@	3.75
Spermaceti	.26@	.27
Stearate Zinc	.30@	.31
Styrax	1.85@	2.25
Tartaric Acid	.64	Nom'l
Tragacanth, No. 1	4.25@	4.50
Triethanolamine	.34½	Nom'l
Violet Flowers	1.75@	2.00
Zinc Oxide, U. S. P. bbls.	.10½@	.10¾

OILS AND FATS

Castor No. 1, tanks	.13@	
Cocoanut, Manila Grade, c.i.f., tanks	.0835@	
Corn, crude, Midwest, mill, tanks	.12¾@	
Corn Oil, distilled, bbls	.15½	Nom'l
Cotton, crude, Southeast, tanks	.12¾@	
Grease, white	.08⅞@	
Lard	.1380@	
Lard Oil, common, No. 1 bbls.	.14@	
Palm, Niger, drums	.08¼@	
Peanut, refined, barrels	.16½	Nom'l
Red Oil, distilled, tanks	.12½@	
Stearic Acid		
Triple Pressed	.18⅝@	.19⅝
Doubled Pressed	.15⅞@	.16⅞
Tallow, acidless, barrels	.14¼@	
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